VOL. XIV, No. 1
JANUARY 1953

Journal of the

AMERICAN PHARMACEUTICAL ASSOCIATION

MAYO CLINIC
LIBRARY
FEB 3 1953
ROCHESTER, MINN.

1852 1953

1852 APhA 1953
SECOND CENTURY

Practical Pharmacy Edition

THE AMERICAN PHARMACEUTICAL ASSOCIATION
ASSEMBLES ALL PHASES OF PHARMACY

93818

bullied by a broom

Too tired to tackle
those every-day chores, too tired to do anything but worry about the things she ought to be doing. When examination indicates one of the common iron-deficiency anemias, IBEROL offers a sound, all-in-one blood-building program.

Just three tablets a day
is the average adult dose. These three compact tablets supply the recommended therapeutic dose of iron, the B vitamins including B_{12} and folic acid, ascorbic acid and, to conserve the hematopoietic factors, stomach-liver digest.

For prophylaxis in pregnancy,
old age or convalescence, one or two tablets daily are usually sufficient. In pernicious anemias, IBEROL may be used as a supplemental hematinic to established antipernicious anemia treatment. In bottles of 100, 500 and 1000 sugar-coated tablets.

Abbott

Three Iberol Tablets, the average daily therapeutic dose for adults, supply:

Iberol®

(IRON, B_{12}, FOLIC ACID, STOMACH-LIVER DIGEST WITH OTHER VITAMINS, ABBOTT)

Ferrous Sulfate, U.S.P.....1.05 Gm.
(representing 210 mg. elemental iron, the active ingredient for the increase of hemoglobin in the treatment of iron-deficiency anemia)

Plus these nutritional constituents:

Thiamine Mononitrate	6 mg. (6 x MDR*)
Riboflavin	6 mg. (3 x MDR*)
Nicotinamide	30 mg. (2 x RDA†)
Ascorbic Acid	150 mg. (5 x MDR*)
Pyridoxine Hydrochloride	3 mg.
Pantothenic Acid	6 mg.
Vitamin B_{12}	30 mcg.
Folic Acid	3.6 mg.
Stomach-Liver Digest	1.5 Gm.

*MDR—Minimum Daily Requirement
†RDA—Recommended Daily Dietary Allowance

1-65

ARMOUR

thyrar®

....The Premier Thyroid
Exclusively Prepared By

ISOTHERMIC PROCESSING

An Outstanding Achievement in Glandular Product Control

thyrar—the entirely new, bovine thyroid preparation—is the culmination of decades of experience in glandular product control, with "isothermic processing" as the key to superior product uniformity. Positive isothermic control at every step in manufacture and exclusive use of bovine thyroid glands "quick-frozen" at the time of removal from the animal, provide a new, whole-gland preparation of highest purity.

	LIST PRICE	NET COST TO RETAILER*
100—½ gr. tabs.	$ 1.08	$ .65
1000—½ gr. tabs.	8.35	5.01
100— 1 gr. tabs.	1.17	.70
1000— 1 gr. tabs.	9.25	5.55
100— 2 gr. tabs.	2.20	1.32
1000— 2 gr. tabs.	19.16	11.50

Available in shipping cartons of 12
***Full 40% Discount**

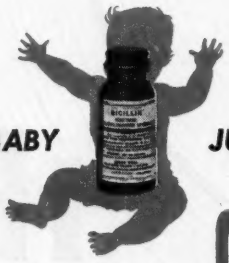
...advantages of thyrar

- **Complete efficacy of the whole gland.**
- **Greater uniformity of finished product.**
- **Elimination of unwanted organic matter.**
- **Double standardization—chemically assayed and biologically tested.**
- **Standardized equivalent to Thyroid U.S.P.—no dosage change required.**
- **Tasteless.**
- **New, small-sized, whole-thyroid tablet offers greater patient convenience.**

THE ARMOUR LABORATORIES CHICAGO 11, ILLINOIS

world-wide dependability

PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH



IT'S TAKEN THIS BABY JUST 13 MONTHS

TO BECOME A GIANT

—AND ACQUIRE A FAMILY!

● In December 1951, BICILLIN* Oral Suspension went on sale. We suspected that penicillin which needs no mixing, remains stable, doesn't taste bitter and produces results, would make physicians enthusiastic. They are!

In June 1952, the medical profession learned (and cheered) that a single *injection* of BICILLIN *L-A* is effective for two weeks or more. They were delighted to find that sensitization is far less frequent. In September 1952, BICILLIN *L-A tablets* appeared. They meet the demand for twice-a-day oral penicillin therapy that gives effective results. Most recent family addition is BICILLIN-SULFAS, for broader-spectrum combination therapy.

All forms of Bicillin are being detailed heavily. Make sure your stocks are adequate to take care of the rapidly growing prescription demand.

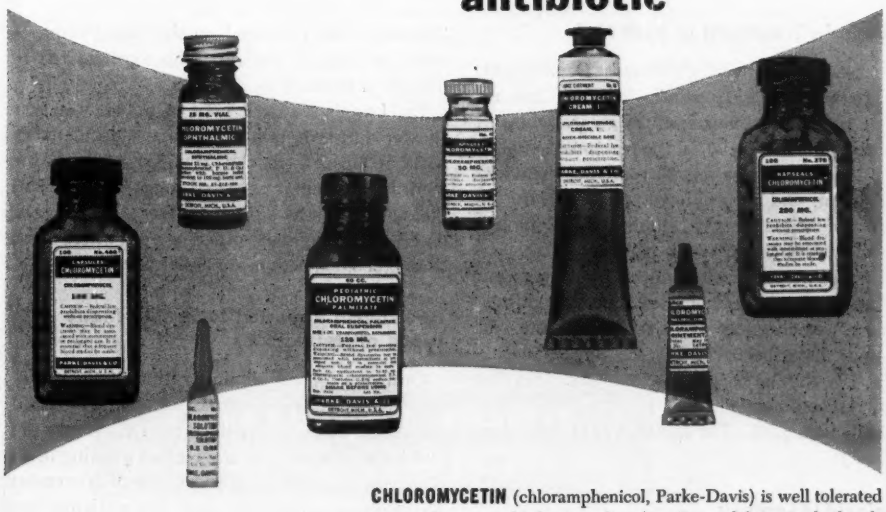
P. S. Nobody overlooks the farmer these days. For his livestock BICILLIN *L-A* Veterinary affords protection against shipping fever and treatment for many infections including pneumonia. For his poultry, BICILLIN Oral Suspension is added to the drinking water to combat respiratory diseases.

Wyeth Philadelphia 2, Pa. Wyeth

*Trademark

Chloromycetin®

notably effective, well tolerated, broad spectrum antibiotic



CHLOROMYCETIN (chloramphenicol, Parke-Davis) is well tolerated in a wide range of infectious disorders. Its usefulness in the hands of the physician has broadened over the years as studies of its effectiveness and tolerability have continued. The many hundreds of clinical reports on **CHLOROMYCETIN** emphasize repeatedly the infrequent occurrence of even mild signs and symptoms of gastrointestinal distress and other side effects in patients receiving the drug.

Similarly, the broad clinical effectiveness of **CHLOROMYCETIN** has been established, and serious blood disorders following its use are rare. Because it is a potent therapeutic agent, **CHLOROMYCETIN** should not be used indiscriminately or for minor infections—and, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

Its wide range of indications and successful record of treatment in millions of patients make **CHLOROMYCETIN** a notable contribution to modern therapy.

CHLOROMYCETIN Kapseals,® 250 mg., bottles of 16 and 100.
CHLOROMYCETIN Capsules, 100 mg., bottles of 25 and 100.
CHLOROMYCETIN Capsules, 50 mg., bottles of 25 and 100.
PEDIATRIC **CHLOROMYCETIN** PALMITATE, equivalent to 125 mg. **CHLOROMYCETIN** per teaspoonful (4 cc.), 60-cc. bottles.
CHLOROMYCETIN Ophthalmic, 25 mg. dry powder for solution, individual vials with droppers.
CHLOROMYCETIN Ophthalmic Ointment, 1%, ⅛-ounce collapsible tubes.
CHLOROMYCETIN Cream, 1%, 1-ounce collapsible tubes.
Ampoules **CHLOROMYCETIN** Solution, 2-cc. ampoules containing 250 mg.
CHLOROMYCETIN *in* each cc., packages of 6.

MEDICAMENTA VERA

Parke, Davis + Company

RECENT

PROGRESS IN MEDICINE

Milontin in Treatment of Petit Mal

The senior registrar, Children's Department, St. Bartholomew's Hospital, London, has reported on the effectiveness of the anticonvulsant, Milontin (Parke-Davis), in the treatment of petit mal. The study covered 20 patients, including 17 children, and according to the physician, the efficacy of Milontin was established. Complete control was obtained in 26 per cent of the patients, and attacks were reduced by 80 per cent or more in 37 per cent of patients. A high incidence of toxicity was noted in 10 patients, but this may have been caused, the physician suggests, by the large doses employed. Further study is recommended.

(Millichap, J. G., *The Lancet*, **6741**: 907, Nov. 8, 1952.)

Isoniazid in Leprosy

Two conflicting reports of the efficacy of isoniazid in the treatment of leprosy were published in November. The first favorable report was made at the annual meeting of the American Society of Tropical Medicine in Galveston, Tex., where Dr. Fernando Latapi, Mexican leprologist, announced the results of a nine-month clinical trial of Nidrazid (Squibb) on 14 lepers in hospitals in Mexico City and Guadalajara. Each patient received an oral dose of 200 to 300 milligrams daily. In 13 of the 14 cases, the lumpy nodules under the skin, and the sores in the nose and eye areas which characterize leprosy, were reduced substantially in size and number. Laboratory examination after treatment showed a reduction of the number of leprosy bacilli present in infected tissue.

A second report, published in *The Lancet*, November 22, 1952, by Dr. John Lowe, contained vastly different results. Dr. Lowe's paper was based on a $5^1/_2$ month study of 27 patients with leprosy in Nigeria. He reported: "Isoniazid has produced no significant improvement in these 27 patients who were treated for periods of from 14 to 23 weeks.

Dr. Lowe's study, it may be noted, was for a shorter duration, and his dosage schedule somewhat reduced from the Mexican trials. More work in this field is expected, since leprosy, while uncommon in the United States, still is a grave problem throughout other areas, where more than 5,000,000 people are afflicted with it.

Terramycin Reported to Benefit Many Types of Dermatoses

Oral and topical administration of terramycin was beneficial in the treatment of 1,194 cases of skin infections, according to Dr. Henry M. Robinson, speaking at the annual meeting of the Southern Medical Association in mid-November. Dr. Robinson reported that 466 patients were treated with oral doses, and no toxic reactions were noted, although 28 patients did have mild to severe gastrointestinal upsets or anal itching. Of 728 patients treated with terramycin ointment, 11 suffered from contact sensitivity. Results of the trials showed that terramycin ointment was beneficial in 105 of 122 cases of impetigo contagiosa, 77 of 83 cases of ecthyma, and 31 of 39 cases of pyoderma. In cellulitis, oral therapy brought good results in 24 of 27 cases. Dr. Robinson stated that both ointment and oral treatment brought good results in a wide variety of dermatoses among the 1,194 cases.

Disinfecting Oral Thermometers

Recommendations for the disinfection of oral thermometers appeared in three public health and nursing journals during October. The final recommendations for disinfection, resulting from a three-year study in the Communicable Disease

(*Continued on page 6*)

Stock the Complete Line of

Cortone®

ACETATE
(CORTISONE ACETATE, MERCK)

ORAL:

CORTONE ACETATE TABLETS
25 mg.
BOTTLES OF 20 TABLETS
25 mg.
BOTTLES OF 40 TABLETS
25 mg.
BOTTLES OF 100 TABLETS
5 mg.
BOTTLES OF 50 TABLETS

OPHTHALMIC:

STERILE OPHTHALMIC SUSPENSION OF CORTONE ACETATE
(in two concentrations)
0.5%—5-cc. VIALS
2.5%—5-cc. VIALS
OPHTHALMIC OINTMENT OF CORTONE ACETATE
1.5%—⅛-oz. TUBES

PARENTERAL:

SALINE SUSPENSION OF CORTONE ACETATE
(in two concentrations)
EACH cc. = 25 mg.
VIALS of 20 cc.
EACH cc. = 50 mg.
VIALS of 10 cc.

HYDROCORTONE® available in the following forms—

HYDROCORTONE TABLETS
(for oral use)
20 mg.
BOTTLES OF 25 TABLETS

TOPICAL OINTMENT OF HYDROCORTONE ACETATE
(for dermatologic use)
2.5%—5-Gm. TUBES

SALINE SUSPENSION OF HYDROCORTONE ACETATE
(for intra-articular injection)
EACH cc. = 25 mg.
VIALS of 5 cc.

ONLY CORTONE® ENABLES YOU TO FILL ALL CORTISONE Rxs

CORTONE offers the most complete line available. It enjoys the support of the medical profession. Adequate supplies are available from your wholesaler. Intensive promotion is constantly building new demand for CORTONE.

All CORTONE and HYDROCORTONE tablets carry this trade-mark Z4

CORTONE and HYDROCORTONE are the registered trade-marks of Merck & Co., Inc. for its brands of cortisone and hydrocortisone, respectively.

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

© Merck & Co., Inc.

OFFICERS OF THE ASSOCIATION

President.....Richard Q. Richards
Honorary President.....Rufus A. Lyman
First Vice-President.....Thomas D. Rowe
Second Vice-President.....Charles F. Lanwermeyer
Secretary and General Manager.....Robert P. Fischelis
Treasurer.....Hugo H. Schaefer

OFFICERS, HOUSE OF DELEGATES

Chairman.....E. M. Josey
Vice-Chairman.....Paul W. Wilcox
Secretary.....Robert P. Fischelis

MEMBERS OF THE COUNCIL

Elected Members: Martin E. Adamo, Walter M. Chase, B. V. Christensen, H. A. B. Dunning, Henry H. Gregg, Glenn L. Jenkins, *vice-chairman;* Ernest Little, *chairman;* George A. Moulton, W. Arthur Purdum. *Ex-officio Members:* R. P. Fischelis, *secretary;* Don E. Francke, E. M. Josey, Charles F. Lanwermeyer, R. Q. Richards, Thomas D. Rowe, Hugo H. Schaefer, *treasurer.*

SECTION CHAIRMEN AND SECRETARIES

Scientific Section: Ole Gisvold, chairman; Ray S. Kelley secretary, Massachusetts College of Pharmacy, 179 Longwood Ave., Boston 15, Mass.
Section on Practical Pharmacy: Elmer M. Plein, chairman; Samuel W. Goldstein, secretary, 2215 Constitution Ave., N.W., Washington 7, D. C.
Section on Education and Legislation: J. L. Voigt, chairman; Robert A. Walsh, secretary, 179 Longwood Ave., Boston, Mass.
Section on Pharmaceutical Economics: Alvah G. Hall, chairman; Irving Rubin, secretary, 128 Marine Ave., Apt. 1-H, Brooklyn 9, N. Y.
Section on Historical Pharmacy: Edward S. Brady, chairman; Edward J. Rowe, secretary, 5819 E. Washington St., Indianapolis 1, Ind.

ADMINISTRATIVE STAFF

Robert P. Fischelis, Phar.D. Sc.D., secretary and general manager; Felix B. Gorrell, controller and office manager.
Justin L. Powers, Ph.D., National Formulary and *Scientific Edition* of THE JOURNAL OF THE A. PH. A.; Bernard Zerbe, A.B., *Practical Pharmacy Edition* of THE JOURNAL OF THE A. PH. A.; Samuel W. Goldstein, Ph.G., Ph.D., laboratory; Don E. Francke, Sc.D. and Gloria Niemeyer, B.Sc., hospital pharmacy; Mary Louise Bergner, A.B., membership.

POSTAL AND SUBSCRIPTION NOTICE

PUBLISHED by the American Pharmaceutical Association. Publication Office: 20th and Northampton Streets, Easton, Pa. Editorial office (and address for all correspondence): 2215 Constitution Ave., N.W., Washington 7, D. C.

ANNUAL SUBSCRIPTION—Journal of the American Pharmaceutical Association complete (both editions): United States and Pan American $7; Canada $7.70; other foreign $8; members of the American Pharmaceutical Association with dues, $4. Each edition, Scientific Edition or Practical Pharmacy Edition: United States and Pan American $4; Canada $4.35; other foreign $4.50. Single numbers, either edition: United States and Pan American $0.35; Canada $0.40; other foreign $0.50.

CHANGE OF ADDRESS—Four weeks' notice is required. Please address your request to the American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington 7, D. C.; and give the old as well as the new address.

JOURNALS LOST IN MAILS cannot be replaced if due to failure to notify of change of address 30 days in advance, or if claim is made after lapse of three months.

ENTERED as second-class matter January 23, 1917 at the Post Office at Easton, Pennsylvania, under the act of March 3, 1879 as 24 times a year; Scientific Edition monthly on the 5th; Practical Pharmacy Edition monthly on the 20th. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 10, 1918.

Progress in Medicine

• • • • • • • • • • • • • *from page 4*

Center of the U. S. Public Health Service, Chamblee, Ga., are:

1. Wipe the contaminated oral thermometer with a cotton ball moistened with a solution of equal parts of 95 per cent ethyl alcohol and tincture of green soap.
2. Rinse the soap off the thermometer with cold running water.
3. Place the thermometer in a solution of 0.5 per cent to 1.0 per cent iodine in either 70 per cent ethyl alcohol or 70 per cent isopropyl alcohol for ten minutes.

(After removal from the iodine solution, shake the thermometer until dry or wipe it with sterile cotton before use.)

The report stated that there was little difference in the efficacy of the various soaps tested, any solution of liquid soaps would be safely used. However, liquid soap, due to some alcohol content, were deemed better than cake or paste soaps.

The three reports appeared in the October issues of *Nursing Research, American Journal of Nursing,* and *Public Health Nursing.*

Camoquin in Malaria

Additional strides in the conquest of malaria were reported last month in India, as a result of a brief study made among Indian soldiers suffering with the disease. A single treatment with Camoquin (Parke-Davis), using 0.5 Gm. and repeating in six hours, cleared 38 patients within two days. Only two patients had relapses. According to another recent report, single doses of Camoquin administered to 496 patients in Brazil resulted in disappearance of the fever within four days in all cases. Each year more than 13 per cent of the world's population suffers from malaria.

(Singh, Inder, and Kalyanum, T. W., *Brit. Med. J.*, **4779:** 312, 1952.)

Visammin as Bronchodilator

The value of visammin (khellin) in the treatment of asthma was shown to be slight in a recent

(Continued on page 8)

THE BIGGEST THING IN THE ANTIBIOTIC MARKET

Terramycin
oral suspension

Best-tasting, best-tolerated,
broad-spectrum dosage form

Pfizer

most complete line of antibiotic specialties

Antibiotic Division • CHAS. PFIZER & CO., INC. • *Brooklyn 6, N. Y.*

Progress in Medicine

• • • • • • • • • • • • • *from page 6*

Chicago study reported in the *J.A.M.A.*, December 6. Visammin, 120 mg. daily, and a placebo were administered orally during alternate periods to eight patients with chronic asthma. The bronchodilator effects of the drug were evaluated by comparison with known bronchodilator drugs using clinical and laboratory methods.

A total of 300 mg. of visammin was given intramuscularly to six patients during acute asthmatic attacks, and its bronchodilator effects compared with epinephrine and aminophylline. The doctors concluded that in the dosage used, visammin demonstrated no significant bronchodilator effect.

The extent of disagreement in the published reports on the use of this drug indicate that additional controlled studies are needed.

Hyaluronidase Relieves Painful Swelling

Dramatic relief from painful swelling resulting from injuries to the head and neck regions is possible with the drug, hyaluronidase, according to a clinical paper published in *Oral Surgery, Oral Medicine and Oral Pathology Review* for December.

The paper, titled "The Use of Hyaluronidase in the Treatment of Traumatic Swelling," describes the results of studies made by Doctors Paul Benzer and Arnold B. Schaffer at Bellevue Hospital and New York University in treating 54 traumatic and post-operative swellings with hyaluronidase.

Hyaluronidase, according to the report, has the ability to rapidly diffuse local accumulation of tissue fluids in the injured area, softening and reducing the swelling. This effect stimulates the circulation and aids in more rapid healing, which minimizes the possibility of infection or formation of calcium deposits. Accompanying pain, pressure, and tension are also reduced.

The authors reported that the drug diffuses the fluids by breaking down the hyaluronic acid, a component of body substances which holds tissue cells together.

In most of the 54 cases treated results were noted within a 22- to 60-minute period. Even a case of two and one half years' duration responded after injections of hyaluronidase, Dr. Benzer reported.

Exchange

PECTIN N.F.

(PURIFIED POLYGALACTURONIC ACID METHYL ESTER)

FOR MEDICINAL AND PHARMACEUTICAL USES

•

Made from Our Own California Citrus Fruits

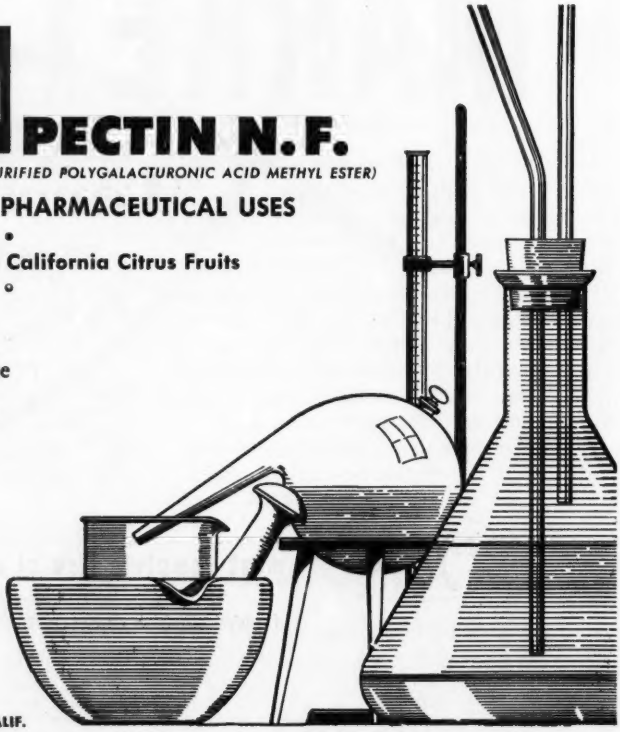
•

Also regularly supplied to pharmaceutical firms:

Sodium Calcium Galacturonate
Hesperidin Methyl Chalcone
Lemon Peel Infusion, dried
Pectin N. F. with dextrose
Citrus Bioflavonoids
Sodium Polypectate
Pectin Albedo
Pectin, L. M.
Pectic Acid
Hesperidin
Naringin

•

SUNKIST GROWERS
PRODUCTS DEPARTMENT • ONTARIO, CALIF.



oral penicillin t.i.d.

. . . for the more common bacterial infectious diseases

Just 1 or 2 Pentids Tablets t.i.d. are particularly effective . . . convenient, easy-to-take . . . cause fewer side effects . . . and are less than ½ the cost of the newer antibiotics.

Bottles of 12 and 100.

formulated for convenient t.i.d. dosage **Pentids**

Squibb 200,000 Unit Penicillin Tablets

"PENTIDS" IS A TRADEMARK OF E. R. SQUIBB & SONS

SQUIBB

Olliffe's Pharmacy in New York's Old Chinatown; founded in 1805.

As Old-Fashioned as Ipecac...

As modern as...

AUREOMYCIN

Lederle

EVERYTHING has changed in pharmacy since this pioneer shop was built in 1805—everything, that is, except the integrity and skill of the pharmacist. These are unchanging and are regarded with warm appreciation by the community of today, as they were in that of the early nineteenth century.

Whether old or new, pharmacies today provide high quality service to the medical professions and to the public. One of the most valuable drugs provided by the pharmacy, for prescription use, is AUREOMYCIN Hydrochloride *Crystalline Lederle.*

Lederle provides the modern pharmacy with antibiotics, vitamins, liver extracts, hematinics, biologicals, allergenics, and pharmaceuticals for livestock. The research which Lederle continually prosecutes is one of the most important factors in the continual forward movement of effective therapy. Its pharmaceutical research goes hand-in-hand with its developmental research in producing ever newer forms for the application of healing agents both old and new.

PACKAGES: *Calcium Oral Drops:* Vials of 20 cc. with dropper. *Calcium Syrup:* Bottles of 4 and 16 fluid ounces. *Capsules:* 50 mg.—Vials of 25 and 100. 100 mg.—Vials of 25 and bottles of 100. 250 mg.—Vials of 16 and bottles of 100. *Intravenous:* Vials of 100 mg. and 500 mg. *Nasal:* Vials of 10 mg. with 10 cc. vials diluent. *Ointment:* Tubes of ½ ounce and 1 ounce. *Ointment (Ophthalmic):* Six tubes of ⅛ ounce each. *Ophthalmic:* Vials of 25 mg.; solution prepared by adding 5 cc. distilled water. *Otic:* Vials of 50 mg. with 10 cc. vials diluent. *PHARYNGETS* Throat Tablets:* 15 mg.—Boxes of 10. *Soluble Tablets:* 50 mg.—Tubes of 40 and bottles of 100. *Surgical Powder:* Vials of 5 Gm. *SPERSOIDS* Dispersible Powder:* Jars of 12 and 25 teaspoonfuls. *Troches:* 15 mg.—Bottles of 25 and 250. *Vaginal Powder:* Vials of 5 Gm. *Vaginal Suppositories:* Jars of 8.

*REG. U. S. PAT. OFF.

LEDERLE LABORATORIES DIVISION AMERICAN CYANAMID COMPANY 30 Rockefeller Plaza, New York 20, N. Y.

NEW PRESCRIPTION PRODUCTS

All items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists, through these pages, will have full information at the same time, or even before, products are detailed to the physician. For inclusion in this free editorial department, send descriptive literature to the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, *2215 Constitution Avenue, N. W., Washington, D. C. Where possible, all descriptions should follow the style shown on these pages.*

BIOMYDRIN

Description: Aqueous solution with a *p*H of 6.2 containing: neomycin sulfate, 0.1 per cent; gramicidin, 0.005 per cent; thonzylamine hydrochloride, 1.0 per cent; phenylephrine hydrochloride, 0.25 per cent; and thonzonium bromide, 0.05 per cent.

Indications: For therapy of a wide range of common upper respiratory disorders and allergic conditions including rhinitis, sinusitis, nasopharyngitis, as well as acute bacterial infections of the nasal mucosa.

Administration: Adult: 2 or 3 sprays in each nostril, four or five times a day as directed by physician. Children: 1 or 2 sprays in each nostril, four or five times a day as directed by physician.

Form Supplied: $^1/_2$ fl. oz. in plastic atomizer.

Source: The Nepera Chemical Company, Inc., Yonkers, N. Y.

CODEMPIRAL

Description: Each yellow and white capsule contains: codeine phosphate, $^1/_2$ gr.; phenobarbital, $^1/_4$ gr.; acetophenetidin, $2^1/_2$ gr.; and acetylsalicylic acid, $3^1/_2$ gr.

Indications: To relieve pain associated with anxiety and tension.

Administration: As directed by physician.

Form Supplied: Bottles of 100 capsules. Narcotic order required.

Source: Burroughs Wellcome & Co., Inc., Tuckahoe 7, N. Y.

G-B-S

Description: Each tablet contains: oxidized bile salts, $1^1/_2$ gr.; atropine methyl nitrate, $^1/_{60}$ gr.; ox bile salts, $1^1/_2$ gr.; and phenobarbital $^1/_8$ gr.

Indications: For biliary stasis, biliary insufficiency, biliary spasticity, indigestion, cholecystitis.

Administration: 2 tablets one hour after meals, later reduced to 1 tablet according to the needs of the patient.

Form Supplied: Bottles of 100, 500, and 1000.

Source: The G. F. Harvey Company, Saratoga Springs, N. Y.

GERICIN

Description: A therapeutic geriatric formula in tablet form containing 27 vitamins, minerals, and lipotropic factors.

Indications: For dietary supplementation, convalescents, and persons suffering from nutritional anemia.

Administration: 2 tablets per day.

Form Supplied: Bottles of 45 and 100 tablets.

Source: Benya Drug Co., Wernersville, Pa.

GLYOTOL

Description: Bisected tablet containing: mephenesin, 0.5 Gm.

Indications: To be used as an adjunct in the treatment of spastic and hyperkinetic states.

Administration: Usually 1 Gm. given orally three to five times a day. Dosage for children should be reduced proportionately.

Form Supplied: Bottles of 100 and 1000 tablets.

Source: U. S. Standard Products Co., Woodworth, Wis.

HARVOGLOBIN

Description: Each fluidounce contains: iron and ammonium citrate, 1.2 Gm., and peptonized iron, 0.4 Gm. (iron equivalent—280 mg.); liver concentrate, 0.5 Gm.; rice bran concentrate, 1.5 Gm.; thiamine hydrochloride, 3.0 mg.; riboflavin, 3.0 mg.; niacin, 20.0 mg.; vitamin B-12, 4.0 mcg.; benzoic acid (as preservative), 0.1 per cent; in a highly stable glycerin base.

Indications: For iron deficiency anemia, secondary anemia, anorexia, malnutrition, general debility, and as a general tonic.

Administration: 3 or 4 teaspoonfuls daily or as indicated.

Form Supplied: Bottles of 8 oz., 1 pt., and 1 gal.

Source: The G. F. Harvey Company, Saratoga Springs, N. Y.

NEOSONE OPHTHALMIC OINTMENT

Description: Ophthalmic ointment, each gram containing: cortisone acetate, 15.0 mg. and neomycin sulfate, 5.0 mg.

(Continued on next page)

Indications: In the treatment of various forms of conjunctivitis, keratitis, marginal ulceration, and mechanical, thermal, or chemical trauma.

Administration: Apply to the eye three or four times daily.

Form Supplied: 1-dram tubes.

Source: The Upjohn Company, Kalamazoo, Mich.

SEDESIN

Description: Tablet containing: mephenesin, 0.5 Gm. and mephobarbital, 30 mg.

Indications: In the relief of musculoskeletal pain and spasm, neuromuscular disorders, pre- and post-operative minor surgery, and in painful examination procedures.

Administration: 2 tablets initially; thereafter 1 tablet t.i.d.

Form Supplied: Bottles of 100.

Source: Otis Laboratories, Inc., New York, N. Y.

TENSODIN

Description: Each tablet contains: non-narcotic papaverine derivative ethaverine hydrochloride, 1/2 gr.; theophylline-calcium salicylate, 3 gr.; and phenobarbital, 1/4 gr.

Indications: For oral administration in coronary insufficiency due to spasm or infarction, angina, peripheral vascular spasm, and thrombosis.

Administration: 1 or 2 tablets, repeated at three- to four-hour intervals.

Form Supplied: Bottles of 100 and 500.

Source: Bilhuber-Knoll Corp., Orange, N. J.

THERIDOL KAPSEALS

Description: Each Kapseal contains: vitamin A, 25,000 units; vitamin D, 1000 units; vitamin B-1, 10 mg.; vitamin B-2, 5 mg.; nicotinamide, 150 mg.; vitamin C, 150 mg.; and vitamin B-12, 2 mcg.

Indications: In treatment of dietary deficiency states.

Administration: 2 Kapseals daily for ten days, then 1 Kapseal daily or as directed by physician.

Form Supplied: Packages of 30, 100, and 1000.

Source: Parke, Davis & Company, Detroit, Mich.

TOSANON

Description: Each teaspoonful (5 cc.) contains: mephenesin 75 mg.; dihydrocodeinone bitartrate, 1.67 mg.; potassium citrate, 400 mg.; and pyrilamine maleate, 7.5 mg.

Indications: For coughs, due to colds or other origins, producing irritation of throat membranes.

Administration: Average adult dose is 1 teaspoonful every three to four hours.

Form Supplied: 1-pt. bottles.

Source: Organon Inc., Orange, N. J.

TYOTOCIN EAR DROPS

Description: Formula for Tyotocin is: tyrothricin, 0.05 per cent; benzocaine, 1.25 per cent; antipyrine, 5.0 per cent; hexylresorcinol, 0.1 per cent; anhydrous propylene glycol, 50.0 per cent; anhydrous glycerin *q. s.*, 100.0 per cent; and alcohol, 0.5 per cent.

Indications: In the treatment of mycotic and bacterial infections of the external auditory canal, such as otitis externa, furunculosis and secondarily infected eczema. Also for relief from pain and congestion in acute otitis media when the ear drum is intact.

Administration: Tyotocin may be instilled directly into the alcohol-cleansed aural canal with a dropper, or, if preferred, the aural canal may be packed with a gauze wick saturated with Tyotocin. The wick should be kept moist with Tyotocin and should be removed 12 to 24 hours later.

Form Supplied: 15-cc. bottles with dropper assembly.

Source: Sharp & Dohme, Inc., Philadelphia, Pa.

TYROPHYLL TROCHE

Description: Each troche contains: tyrothricin, 2 mg.; benzocaine, 7.5 mg.; carbamide, 7.5 mg.; and chlorophyllin, 2 mg.

Indications: For the relief and treatment of throat infections and irritations.

Administration: 1 troche to be dissolved in the mouth, repeated after two hours, not more than 8 troches to be taken in a 24-hour period.

Form Supplied: Bottles of 100, 500, and 1000.

Source: U. S. Standard Products Co., Woodworth, Wis.

Other New Products

(Chemicals, clinical trial drugs, diagnostic aids, and equipment for the retail and hospital pharmacy, and new dosage forms of prescription products).

ALMENIC

The Meyer Chemical Co. has changed the name of their Almetinic capsules to Almenic. The capsule is a combination of iron, B-12, folic acid and other necessary vitamin elements. There is no change in color or formula. Supplied in bottles of 100 and 1000.

PRESCRIPTION PRODUCTS

GANTRICILLIN

Hoffmann-La Roche Inc. has just introduced Gantricillin "Roche." Each Gantricillin tablet contains: Gantrisin, 0.5 Gm., and penicillin G potassium, 100,000 units. The new tablets are available in bottles of 24, 100, and 500.

GELFOAM POWDER

Gelfoam in powder form has been recently introduced by *The Upjohn Company.* It is indicated for control of bleeding in the upper gastrointestinal tract. It is to be administered as directed by physician. It is supplied in paper cans containing 10 Gm.

HISTOPLASMIN

Histoplasmin is the filtrate from the culture of *Histoplasma capsulatum.* It is employed as an aid in the diagnosis of histoplasmosis and the differentiation of possible histoplasmosis from coccidioidomycosis, sarcoidosis and other mycotic or bacterial infections and in the interpretation of roentgenographic plates showing pulmonary infiltrations and calcification. It is supplied in two 1-cc. vials, one containing 0.01 cc. of Histoplasmin and the other containing 1 cc. of diluent, by *Parke, Davis & Company, Detroit, Mich.*

MILKINOL

Kremers-Urban Company has recently made available Milkinol, a new self-emulsifying mineral oil. A small quantity of Milkinol mixed with a large volume of any preferred aqueous vehicle creates a uniform mineral oil emulsion of fine-particle size. The recommended dosage for adults is 1 to 2 tablespoonfuls of Milkinol mixed with a glass of water; for children 6-12 years, 1 to 2 teaspoonfuls mixed with any aqueous beverage; for children under 6 years, as determined by the physician. To be taken only at bedtime, except upon direction of a physician.

MYCIGUENT CREAM

The Upjohn Company has recently introduced an emulsion-type ointment containing neomycin sulfate, 5 mg. per Gm., Myciguent Cream. It is indicated in treatment of such skin infections as impetigo, barber's itch, infectious eczematoid dermatitis, pustules, pustular acne, infected ulcers, and boils. It should be applied from two to five times daily. Supplied in $^1/_2$-oz. tubes.

NEW PENICILLIN DOSAGES

Procaine penicillin G in aqueous suspension has been made available in two new dosages by *Winthrop-Stearns Inc.* The products, one of 600,000 units and the second containing 1,000,000 units, supplement the extensive line of penicillin preparations previously introduced. The new dosages are supplied in sterile disposable Ogle syringes in boxes of 5's. The syringes do not require refrigeration.

SYNCROBIN SUPPOSITORIES

Schenley Laboratories, Inc., has introduced Syncrobin Suppositories—a combination of two antibiotics, penicillin G potassium, 200,000 units and the equivalent of 200 mg. dihydrostreptomycin base as dihydrostreptomycin sulfate in a bland nonirritating base. They are indicated for treatment of a wide range of pathogenic disorders of the vaginal tract and for preoperative and postoperative use in major gynecologic surgery. Syncrobin Suppositories are effective in controlling penicillin-sensitive and streptomycin-sensitive secondary invaders often associated with trichomonas vaginitis eukorrhea, and other disorders of the vaginal tract.

UROKON SODIUM STERILE SOLUTION 70%

The Mallinckrodt Chemical Works have introduced Urokon in a new form, Urokon Sodium Sterile Solution 70%. It is available in 25-cc. ampuls. Packages of 1, 5, and 20.

VERGITRYL INTRAMUSCULAR

Vergitryl Intramuscular (Squibb *Veratrum viride* fraction), a parenteral form of uniformly standardized purified extract of *Veratrum viride,* has been made available by E. R. Squibb & Sons for the treatment of acute hypertensive episodes. It is useful in treating the hypertensive complications of pregnancy.

(Index on next page)

NEW PRESCRIPTION PRODUCTS INDEX

JULY, 1952 TO JANUARY, 1953

BY PRODUCT

Aerolone Compound, Lilly, Sept., 612
Aerosporin Otic Sol., Burroughs Wellcome, Sept., 613
Anectine Chloride, Burroughs Wellcome, Oct., 713
Apamide, Ames, Oct., 713
A.P. Cillin, White, Dec., 839
Apolamine, Winthrop, Aug., 553
Apromal, Ames, Oct., 713
Aquacillin A-S, Schenley, Oct., 713
Aqueous hormones, Breon, Aug., 555
Aramine w/Mijit atomizer, Sharp & Dohme, Oct., 713
Aureomycin Calcium oral drops & syrup, Lederle, Dec., 841

Bacimycin, Walker, Aug., 553
Bacimycin tablets, Walker, Dec., 841
Bemocin caps., Ayerst, July, 511
Benadryl with Hyoscine, Parke-Davis, Dec., 841
Bevidox Solution, Abbott, Nov., 761
Bicillin L-A, Wyeth, Oct., 713
Bi-Co-Tussin, Bischoff, Oct., 713
Bidrolin, Armour, Aug., 553
Breonex-M, Breon, Oct., 713
Bristamin lotion, Bristol, July, 511
Bristapen tablets, Bristol, Dec., 839
Bristo-O-Matic Syringe, Bristol, Nov., 763
Butazolidin, Geigy, July, 511

Caladryl Cream, Parke-Davis, Dec., 841
Cardalin, Irwin, Neisler, Dec., 839
Cenasert, Central, Dec., 839
Chloral Hydrate, Fellows, Sept., 612
Chloro-Sul, Columbus Pharmacal, Dec., 841
Cillorets, Bristol, Dec., 839
Cobetaron, Warren-Teed, Aug., 553
Cortisone Acetate, Upjohn, July, 507
Cortogen Acetate injection, Schering, Dec., 841
Cortogen Acetate Ophth. Sol., Schering, Nov., 761
Covisten, Organon, Oct., 714
Cream Phenergan Hydrochloride, Wyeth, Oct., 715
Crephex, Schenley, Nov., 761
Cumertillin tablets, Endo, Oct., 714

Dainite, Irwin, Neisler, Dec., 842
Dermabase, Marcelle, Dec., 842
Dexamyl elixir, SK&F, July., 511
Dexedrine Spansules, SK&F, Sept., 612
Dioloxol, G. W. Carnrick, July., 511
Distrycillin A.S., Squibb, Nov., 763
Dodecabee-1000, Miller, Aug., 553
Dormison liquid, Schering, July, 513
Drilitol Spraypak, SK&F, Oct., 715
Ducobee 1000, Breon, Oct., 714
Dust respirator, DeVilbiss, July, 513

Ediol, Schenley, Nov., 761
Erythrocin, Abbott, Nov., 763
Esteed tablets, Warren-Teed, Nov., 761
Estrone-Progesterone, Breon, Dec., 842

Feosol Hematonic, SK&F, Oct., 714
Fiorinal tablets, Sandoz, Oct., 714
Furacin Soluble Powder, Eaton, Dec., 842

Gantrisin Diethanolamine ophth. oint., Hoffman-LaRoche, Aug., 555
Gantrisin nasal sol., Hoffman-LaRoche, Dec., 842
Gantrisin Pediatric susp., Hoffman-LaRoche, Oct., 715
Gemonil, Abbott, July, 511
Guaiatussin, White, Dec., 839

Hedulin, HED Pharmaceuticals, Aug., 553
Hexamethon, Burroughs Wellcome, Sept., 612
Histussin, Meyer, Nov., 762
Hyazyme, Abbott, July, 512
Hydrolose Fortified, Upjohn, Oct., 716

Ilotycin, Lilly, Nov., 763
INH, Lilly, Sept., 612
Isolyn, Abbott, Sept., 613
Isopto-Alkaline, Alcon Labs., Nov., 763
Isopto-Cetamide, Alcon Labs., Dec., 839

Kolantyl Gel, Merrell, Oct., 716

Lactinex tablets, Hynson, Westcott & Dunning, Oct., 714

Martussin-MRT, Thompson, Dec., 840
Mega-B, Miller, July, 512
Menagen with Methyltestosterone, Parke-Davis, Dec., 842
Mephamide, Columbus Pharmacal, Dec., 842
Mephedexin, Columbus Pharmacal, Dec., 842
Mephyton Emulsion, Merck, Oct., 716
Mertestate, Breon, Dec., 842
Methium Chloride, Chilicott, Aug., 555
Milibis tablets, Winthrop, Sept., 613
M.I.V., Merrell, Aug., 554
Modulan, Am. Chloresterol, Oct., 716
Mol-Iron E.M.F., White, Sept., 613
Mucotin, Harrower, Nov., 763
Myadec, Parke-Davis, Dec., 840

Natabec Kapseals, Parke-Davis, Dec., 840
Natalins, Mead Johnson, Oct., 714
Neobacin tablets, C.S.C., Oct., 714
Neocylate w/codeine, Central, Dec., 842
Neocyten Central, Dec., 840
Neohydrin, Lakeside, July, 512
Neo-Penil, SK&F, July, 512
Neo-Synephrine Ophth. Viscous Sol., Winthrop, Nov., 763
Neo-Synephrine-Thenfadil-Zephiran, Winthrop, Oct., 716
Nio-A-Let, Nion, Aug., 554
Noctec, Squibb, July, 512
Novahistine, Pitman-Moore, July, 512
Novahistine tablets, Pitman-Moore, Dec., 842
Nydrazid inj., Squibb, Dec., 843

Oxityl-P, Merrell, Sept., 613

Penicillin G Procaine in Aqueous susp., Abbott, Nov., 762
Pentids soluble tablets, Squibb, Oct., 716
Phenergan Expectorant w/codeine, Wyeth, Aug., 555
Phenergan Hydrochloride, cream, Wyeth, Oct., 715
Phenergan lotion w/Neocalamine, Wyeth, Sept., 613
Plebilin Plus, Plessner, Dec., 840
Polysporin ointment, Burroughs Wellcome, Sept., 613
Polyvims, Miller, Aug., 554
Pontocaine Cream, Winthrop, Dec., 843
Prantal Methylsulfate, inj., Schering, Aug., 555
Pyribenzamine cream w/Zirconium, Ciba, Aug., 555
Pyronil & Co-Pyronil, Lilly, July, 512

Redisol elixir, Sharp & Dohme, July, 513
Rhoplex, Vitarene, Aug., 554
Rhylicream, Lederle, July, 513
Rubramin, Squibb, Aug., 555

Sedadrops, Walker, Oct., 715
Solacthyl inj., Squibb, July, 513
Soris, Ar-Ex, Nov., 762
Spectrocin, Squibb, Oct., 715
Strepels (vet.), Wyeth, Aug., 554
Sugracillin 250M & Sulfa-Sugracillin 250M, Upjohn, Oct., 716
Sulestrex Piperazine elixir, Abbott, Dec., 843
Sulfonsol with Pencillin, National Drug, Dec., 840
Syrup H.S., Talbott, Nov., 762

Tegumin Creme, Warren-Teed, Nov., 762
Terramycin oral susp., Pfizer, Oct., 716
Thaverine, Pitman-Moore, Dec., 840
Theelandrol, Parke-Davis, Dec., 841
Thera-Concemin, Merrell, Dec., 843
Therapeutin, Walker, Oct., 715
Thyrar, Armour, Dec., 841
Tisin, Casimir Funk, Oct., 715
Tolulexin elixir, Miller, Dec., 843
Tricainal, Ciba, July, 513
Trilene, Ayerst, July, 513
Trophite, SK&F, Dec., 843
Tryptal aerosol, Armour, Oct., 716
Tweltone, Pitman-Moore, Dec., 843
Tyvid, Merrell, Sept., 613

Valentine's Meat Extract, Valentine, Dec., 843
Vascutol, Schenley, Nov., 762
Vergitryl tablets, Squibb, Aug., 554
Vi-Aquamin, U. S. Vitamin, Aug., 554
Vi-Lin Drops, Abbott, Nov., 762
Vita-Kaps improved, Abbott, Oct., 716

Xiphisternal cartilage, Armour, Dec., 843

BY MANUFACTURER

Abbott Laboratories
Bevidox Sol., Nov., 761
Erythrocin, Nov., 763
Gemonil, July, 511
Hyazyme, July, 508
Isolyn, Sept., 613
Pencillin G Procaine, Nov., 762
Sulestrex Piperazine Elixir, Dec., 843
Vi-Lin Drops, Nov., 762
Vita-Kaps, Improved, Oct., 716

Alcon Laboratories
Isopto-Alkaline, Nov., 763
Isopto-Cetamide, Dec., 839
American Cholesterol Products, Inc.
Modulan, Oct., 713
Ames Company, Inc.
Apamide, Oct., 713
Apromal, Oct., 713
Ar-Ex Cosmetics, Inc.
Soris, Nov., 762
Armour Laboratories
Bidrolin, Aug., 553
Thyrar aerosol, Oct., 716
Xiphisternal Cartilage, Dec., 843
Ayerst, McKenna & Harrison, Ltd.
Bemocin caps., July, 511
Trilene, July, 513
Ernst Bischoff Company
Bi-Co-Tussin, Oct., 713
George A. Breon & Co., Inc.
Aqueous hormones, Aug., 555
Breonex-M, Oct., 713
Estrone-Progesterone, Dec., 842
Mertestate, Dec., 842
Bristol Laboratories, Inc.
Bristamin Lotion, July, 511
Bristapen tablets, Dec., 839
Brist-O-Matic Syringe, Nov., 763
Cillorets, Dec., 839
Mytinic Liquid, Aug., 555
Burroughs Wellcome & Co. (USA)
Aerosporin Otic Sol., Sept., 613
Anectine Chloride, Oct., 713
Hexamethon, Sept., 612
Polysporin Ointment, Sept., 613
G. W. Carnrick Co.
Dioloxol, July, 511
Central Pharmacal Company
Cenasert, Dec., 839
Neocylate w/codeine, Dec., 842
Neocyten, Dec., 840
Chilcott Laboratories
Methium Chloride, Aug., 555
Ciba Pharmaceutical Products, Inc.
Pyribenzamine cream w/zirconium, Aug., 555
Tricainal, July, 513
Columbus Pharmacal Co.
Chloro-Sul, Dec., 841
Mephamide, Dec., 842
Mephedexin, Dec., 842
Commercial Solvents Corp., (C.S.C.)
Neobacin tablets, Oct., 714
The Devilbiss Company
Dust respirator, July, 513
Eaton Laboratories
Furacin Soluble Powder, Dec., 842
Endo Products, Inc.
Cumertillin tablets, Oct., 714
Fellows Pharmaceuticals, Inc.
Chloral Hydrate, Sept., 612
Casimir Funk Laboratories, Inc.
Tisin, Oct., 715
Geigy Company, Inc.
Butazolidin, July, 511
Harrower Laboratories
Mucotin, Nov., 763
HED Pharmaceuticals, Inc.
Hedulin, Aug., 553
Hoffman-LaRoche, Inc.
Gantrisin diethanolamine ophth. oint., Aug., 555
Gantrisin nasal sol., Dec., 842
Gantrisin pediatric susp., Oct., 715
Hynson, Westcott & Dunning, Inc.
Lactinex tablets, Oct., 714
Irwin, Neisler & Company
Cardalin, Dec., 839
Dainite, Dec., 842
Lakeside Laboratories
Neohydrin, July, 512
Lederle Laboratories Div., American Cyanamid Co.
Aureomycin Calcium oral drops & syrup, Dec., 841
Rhulicream, July, 513
Eli Lilly & Company
Ilotycin, Nov., 763
INH, Sept., 612
Pyronil & Co-Pyronil, July, 512
Marcelle Pharmaceuticals, Inc.
Dermabase, Dec., 842
Mead Johnson & Co.
Natalins, Oct., 714
Merck & Co., Inc.
Mephyton Emulsion, Oct., 716
Wm. S. Merrell Co.
Kolantyl Gel, Oct., 716
M.I.V., Aug., 554
Oxityl-P, Sept., 613
Thera-Concemin, Dec., 843
Tyvid, Sept., 613
Meyer Chemical Co., Inc.
Histussin, Nov., 762
E. S. Miller Laboratories, Inc.
Dodecabee-1000, Aug., 553
Mega-B, July, 512
Polyvins, Aug., 554
Talulexin, Dec., 843
National Drug Company
Sulfonsol w/Penicillin, Dec., 840
Nion Corporation
Nio-A-Let, Aug., 554
Organon, Inc.
Covisten, Oct., 714
Parke, Davis & Co., Inc.
Benadryl w/Hyoscine, Dec., 841
Caladryl Cream, Dec., 841
Menagen with Methyltestosterone, Dec., 842
Myadec, Dec., 840
Natabec Kapseals, Dec., 840
Theelandrol, Dec., 841
Chas. Pfizer & Co., Inc.
Terramycin oral susp., Oct., 716
Pitman-Moore Company
Novahistine, July, 512
Novahistine tablets, Dec., 842
Thaverine, Dec., 840
Tweltone, Dec., 843
The Paul Plessner Company
Plebilin Plus, Dec., 840
Sandoz Pharmaceuticals
Fiorinal tablets, Oct., 714
Schenley Laboratories, Inc.
Aquacillin A-S, Oct., 715
Crephex, Nov., 761
Ediol, Nov., 761
Vascutol, Nov., 762
Schering Corporation
Cortogen-Acetate inj., Dec., 841
Cortogen Acetate ophth. susp., Nov., 761
Dormision liq., July, 509
Prantal Methylsulfate inj., Aug., 555
Sharpe & Dohme, Inc.
Aramine w/Mijit Atomizer, Oct., 713
Redisol elixir, July, 513
Smith, Kline & French Laboratories, Inc.
Dexamyl elixir, July, 511
Dexedrine Spansules, Sept., 612
Drilitol Spraypak, Oct., 175
Feosol Hematonic, Oct., 714
Neo-Penil, July, 512
Trophite, Dec., 843
E. R. Squibb & Sons
Distrycillin A-S, Nov., 763
Noctec, July, 512
Nydrazid inj., Dec., 843
Pentids soluble tablets, Oct., 716
Rubramin, Aug., 555
Solacthyl inj., July, 513
Spectrocin, Oct., 715
Vergitryl tablets, Aug., 554
Talbott Pharmaceuticals
Syrup H.S., Nov., 762
Marvin R. Thompson, Inc.
Martussin-MRT, Dec., 840
U. S. Vitamin Corp.
Vi-Aquamin, Aug., 554
The Upjohn Company
Cortisone Acetate, July, 511
Hydrolose Fortified, Oct., 715
Sugracillin 250M & Sulfa-Sugracillin 250M, Oct., 716
Valentine & Company
Valentine's Meat Extract, Dec., 843
The Vitrarene Company
Rhoplex, Aug., 554
Walker Laboratories, Inc.
Bacimycin, Aug., 553
Bacimycin tablets, Dec., 841
Sedadrops, Oct., 715
Therapeutin, Oct., 715
The Warren-Teed Products Co.
Cobetaron caps., Aug., 553
Esteed tablets, Nov., 761
Tegumin Creme, Nov., 762
White Laboratories, Inc.
A P Cillin, Dec., 839
Guaiatussin, Dec., 839
Mol-Iron E.M.F., Sept., 613
Winthrop-Stearns, Inc.
Apolamine, Aug., 553
Milibis tablets, Sept., 613
Neo-Synephrine Ophth. Viscous Sol., Nov., 763
Neo-Synephrine-Thenfadil-Zephiran, Oct., 716
Pontocaine Cream, Dec., 843
Wyeth, Inc.
Bicillin L-A, Oct., 713
Cream Phenergan Hydrochloride, Oct., 715
Phenergan Expectorant w/codeine, Aug., 555
Phenergan Lotion w/Neocalamine, Sept., 613
Strepels (vet.) Aug., 554

New A. Ph. A. Members

THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE.

NEW LIFE MEMBER

Takalo, Donald J., Detroit, Mich.

ALABAMA

Argo, James R., Millbrook
Elliott, James M., Birmingham
Rice, Brenice G., Luverne

CALIFORNIA

Edelman, George M., Los Angeles
Elrod, J. Murray, Alameda
Felton, Arnold G., Long Beach
Hamor, Glenn H., Los Angeles
Horgan, Patrick M., Long Beach
Katz, Kenneth, Santa Cruz
Kopple, Ethel B., Los Angeles
Murphy, Will E., San Francisco
Powell, Harry B., Carpenteria
Quinlan, Maurice A., Modesto

CONNECTICUT

Maizitis, August, Greenwich
Murawski, Joseph E., Terryville
Vincent, Wayne O., Rockville

DELAWARE

Heath, Charles S., Sr., Laurel

DISTRICT OF COLUMBIA

Aldrich, Clayton B.

FLORIDA

Cossman, Hal E., Fort Lauderdale
Cox, Steve, Tampa
Gibson, Charles O., St. Petersburg
Martin, J. Ben, Orlando

ILLINOIS

Kaplan, Aaron, Chicago
Prybylo, Chester L., Chicago
Snow, Eldred F., La Salle

INDIANA

Collier, Albert W., Terre Haute
Soucy, Jean R., West Lafayette

IOWA

Crumrine, James E., Cedar Rapids
Smith, J. H., Jr., Rock Valley

KENTUCKY

Stingley, Luther A., Covington
Townsend, Fred S., London

MAINE

Jones, Margaret E., Richmond

MARYLAND

Hoy, R. Gordon, Baltimore
Poppleton, Miller J., Bethesda

MASSACHUSETTS

Friedberg, Samuel, Worcester
Gavin, Thomas J., Springfield
Kozera, William A., Hadley
Mosher, Charles A., Hingham

MICHIGAN

Breitenstein, Frank J., Grand Rapids
Campbell, Alfred E., Ann Arbor
Herrick, William T., Detroit
Matalon, Abraham H., Big Rapids

MINNESOTA

Roloff, Donald, Heron Lake

MISSOURI

Hohmann, M. Reno, Richmond Heights
Koyama, Edward T., St. Louis

NEW HAMPSHIRE

Dockham, Charles D., Laconia
Pigeon, Hervey J., Manchester
Shedd, Paul W., Keene

NEW JERSEY

Casabona, Anthony, Montclair
Savitz, Gerald S., Fanwood

NEW YORK

Beadle, Kenneth G., Saugerties
Berliner, Harvey W., Jamaica, L. I.
Burns, Alvin, Orangeburg
Cooper, Israel, Glen Cove
Devillechabrolle, Robert, New York City
Freeman, Julius E., Bayside
Passannante, Anthony, Rochester
Perelman, Nathan H., New York City
Theobald, Charles E., Syracuse
Wang, Mrs. Liance L., Brooklyn

OHIO

Baluk, George, Westlake
Constantine, M. Anthony, Steubenville
Fitzpatrick, William E., Piqua
Job, Betty K., Cleveland
Spaccarelli, Deno A., Cincinnati

PENNSYLVANIA

Hope, Donald W., Philadelphia
Mendelson, Cecil, Pittsburgh
Metkowski, Leonard P., Philadelphia
Rudkin, George O., Jr., Bethlehem
Wizerkaniuk, Walter, Philadelphia

TEXAS

Cook, Royce G., San Antonio
Loupe, Faye H., Alice
McClure, John W., Dallas
Payne, Graydon W., Fort Worth
Wilburn, Paul D., Houston

UTAH

Dunn, Bud D., Salt Lake City
Nicholson, Douglas I., Salt Lake City
Sheya, James A., Salt Lake City

VIRGINIA

Gorrell, Felix B., Arlington
Hirsch, Sidney A., Norfolk

WASHINGTON

Bailor, Warren R., Seattle
Burmaster, Fred, Seattle
Collins, Leslie E., Tacoma
McGrath, Anna M., Seattle
Morgan, H. D., Tacoma

CANADA

Edick, Joyce D., Manitoba
Reedman, Eric J., Toronto, Ont.

FOREIGN

Chen, Juan, Jr., Panama, Republic

Deceased Members

Brigham, Kenyon A., Ann Arbor Mich., November 30, 1952
Florenzie, Oscar H., Jersey City, N. J., July 4, 1952
Guerrieri, Emidio, Morgantown, W. Va.
Haebler, Philip E., New York City
Heimoff, Abraham, Newark, N. J., August 23, 1952
Lohrmann, Kurt, Altadena, Calif.
Menke, Hugo L., San Francisco, Calif.
Steinle, Louis V., Cincinnati, Ohio
Watman, George P., Dover, N. J.
Wright, John H., New York City, November 11, 1952

Published bi-monthly

DRUG STANDARDS

A PUBLICATION OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

Formerly the Bulletin of the National Formulary Committee, the name "Drug Standards" was adopted in 1951 because it more closely paralleled the editorial content of this important publication. First started in 1930 as a mimeographed bulletin circulated to National Formulary Committee members, it was later made available, in 1938, to others as a periodical on a subscription basis. Today, it is a medium for exchange of ideas on drug standards, including periodic reports on U.S.P. or N.F. Committee activities, preliminary monographs on new U.S.P. or N.F. drugs, contributed articles, notes or other communications bearing on currently official, or soon to be official, drugs. Queries and answers of general interest relating to official standards are contributed, as well as reports of collaborative studies from the ADMA and APhMA Combined Contact Committee. Published bi-monthly, printed by the offset method from xerl-typed copy, the subscription price remains the same, $5.00 per year.

American Pharmaceutical Association
2215 Constitution Ave., N. W., Washington 7, D. C.

Enclosed is $_____ to cover the cost of a_____ year (s) subscription to Drug Standards

Name _____

Address _____

City _____ State _____

New, Improved 'Homicebrin' with Vitamin B_{12}

'Homicebrin' now provides *six* essential vitamins in a smooth, palatable, homogenized mixture.

Each 5 cc. contain:

Vitamin A (Palmitate)	3,000 U.S.P. units
Thiamin Chloride	1 mg.
Riboflavin	1.2 mg.
Vitamin B_{12} (Activity Equivalent)	3 mcg.
Ascorbic Acid	60 mg.
Vitamin D	1,000 U.S.P. units

Feature the 4-ounce and economical 1-pint bottles in your prescription department. There is no increase in price.

Eli Lilly and Company

Indianapolis 6, Indiana, U.S.A.

For the prophylaxis or treatment of multiple vitamin deficiencies in infants and children, physicians prescribe

'Homicebrin'

(HOMOGENIZED MULTIPLE VITAMINS, LILLY)

Journal of the

AMERICAN PHARMACEUTICAL ASSOCIATION

L. XIV, NO. 1
NSECUTIVE NO. 1

Practical Pharmacy Edition

Committee on Publications
V. CHRISTENSEN, Chairman
WALTER M. CHASE
ROBERT P. FISCHELIS
DON E. FRANCKE
HUGO H. SCHAEFER

•

Editor
ROBERT P. FISCHELIS

Managing Editor
BERNARD ZERBE

Pharmacy Editor
SAMUEL W. GOLDSTEIN

Staff Associates
DON E. FRANCKE
GLORIA NIEMEYER
JUSTIN L. POWERS

•

Address All Communications Regarding Advertising to the Managing Editor, 2215 Constitution Ave., Washington 7, D. C.

JANUARY, 1953

TABLE OF CONTENTS

FEATURES—

Employment Attitudes of Our Seniors, by Esther Hall 22
Glycerinated Gelatin as a Suppository Base, by L. F. Tice and R. E. Abrams 24
The Formulation of a Water-Soluble Suppository Base, by W. H. Hassler and G. J. Sperandio 26
What the Pharmacist Should Know About Allergy, by Edward P. Claus 28
Proceedings of the Ceremonial Session 31
Greetings from Foreign Organizations, by W. R. Cutler 32
Response, by George D. Beal 33
Greetings from Domestic Organizations, by Malcolm T. MacEachern 34
Greetings from Government Agencies, by Leonard A. Scheele 36
Response, by Robert P. Fischelis 37
A Student Detailing Program, by Donald C. Riley 38
A. PH. A. Professional Exhibit Shown at National Meetings 44
A. C. A. Plans Eastern Meeting in New York 46
A. A. A. S. Holds Annual Meeting 64

DEPARTMENTS—

A. PH. A. Branches 62
A. PH. A. Officials and Administrative Staff 6
Briefly Noted 56
New A. PH. A. Members 16
National Defense 40
New Prescription Products 11
Recent Progress in Medicine 4
Straight From Headquarters 20
Typical Days 42

Copyright, 1953
American Pharmaceutical Association
2215 Constitution Ave., N. W.
Washington 7, D. C.

An Important Assembly

THERE is something fascinating about assembling a jigsaw puzzle. One never fails to be amazed at how the various parts finally fit in to make a complete and satisfying picture. The front cover of this issue of our JOURNAL is an artist's conception of how the various segments of pharmacy, when assembled in the House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION, combine to form the pleasing picture of the American Institute of Pharmacy which houses the activities of the AMERICAN PHARMACEUTICAL ASSOCIATION.

No matter how greatly the various segments of pharmaceutical industry may differ with each other on economic questions and no matter how wide the gap between the thinking of respective professional groups within the body pharmaceutic may be, it is possible for all groups to meet on common ground in the A.PH.A.'s House of Delegates.

The AMERICAN PHARMACEUTICAL ASSOCIATION is the only national professional society of pharmacists which admits to its membership any reputable pharmacist on the basis of his professional status and without reference to the specific pharmaceutical activity in which he may be engaged. He may be the owner of a pharmacy, the head of a manufacturing concern, a laboratory employee of a manufacturer, an employee or owner of a wholesale drug company, a journalist, a teacher, an administrator, a sales representative, an association secretary, or, in fact, any type of employee or owner of an establishment engaged in any phase of pharmacy.

There must be for every profession a national organization of this kind. In the AMERICAN PHARMACEUTICAL ASSOCIATION, the House of Delegates supplies the forum in which representatives of the various branches of pharmacy may be heard and in which any of their organizations may offer resolutions or recommendations for the solution of any problem in which they are interested.

The House of Delegates operates on a majority rule basis so there can be action on any problem that may be presented to the House. These actions are expressed in the form of resolutions or recommendations and become the basis for administrative procedure by the ASSOCIATION's officers.

When trade associations are organized for specific purposes, their membership is usually composed of all who have an active interest in promoting those purposes. Retail druggists' associations are organized for the protection of the economic interests of drug store owners. Manufacturers' and wholesalers' organizations in turn are organized to protect their respective interests. Their executive bodies can meet for the discussion of mutual problems and matters of trade interest but their collective action is limited by law to certain areas.

There are no such barriers for the meeting of professional men and women who have a common purpose concerned with the promotion of professional licensure, education and research in the public interest, especially in matters of health.

Those concerned about the future of pharmacy in any of its phases might well make use of pharmacy's professional forum where professional problems can be discussed and conclusions can be reached by majority rule. The House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION

is that forum, and the ASSOCIATION's standing in professional and lay circles is sufficiently high to assure recognition for any viewpoint that may be expressed by the ASSOCIATION.

The Magnuson Report

THE President's Commission on the Health Needs of the Nation has filed a comprehensive report. The Committee was headed by Dr. Paul Magnuson, former head of the Medical Service of the Veterans' Administration, and included in its membership persons of outstanding reputation in various walks of life including representatives of the medical profession. Its major recommendations call for (1) a broad extension of medical prepayment plans, to operate through the widespread use of group practice and community-health hospital centers, with consumer representation in policy making; (2) Federal grants-in-aid, which it believes should be matched by the states to bolster such prepayment plans; (3) creation of a cabinet post of Health and Security; (4) establishment by Congress of a permanent Federal Health Commission, to make continuing studies of the nation's health status and to report annually to the President and Congress, and (5) Federal grants-in-aid for medical education, medical research, local health services, hospital construction and pilot studies in organizing medical services on a national basis.

A reading of the report and attendance at some of the hearings held by the Commission on various factors dealing with the problem of providing adequate medical care for all people at a cost which they can afford, leads to the conclusion that the Committee concerned itself chiefly with broad principles. It did not attempt to go into detail on such matters as providing drugs, for example. It referred to the cost of drugs and to the necessity for including in prepayment plans, the more expensive drugs and appliances. It noted that the fourteen per cent decline in the death rate between 1937 and 1949 was aided by the discovery of "sulfa drugs" and antibiotics and their therapeutic application.

Public discussion of the report as well as comment from medical and other professional sources to date indicates that the issues raised by the Commission are not new, and the manner in which they were discussed and presented to the public is quite objective. There will, of course, be disagreements as to the cause of various unsatisfactory situations pointed out by the Commission and some of the suggested remedies. Members of the Commission itself did not see eye-to-eye on all recommendations and several filed statements dissenting from various parts of the report. —One of the observations made by the Commission can be agreed to without much debate, namely, that "the maintenance of health must now be added to food, shelter and clothing as one of the necessities of living."

Pharmacists are perhaps closer to the people than any other group within the membership of the healing arts. They know how strongly people feel today about securing the advantages of modern health facilities and medical care.

The report of the Commission coming at the end of the Truman administration will undoubtedly be subjected to further study and investigation by the new administration. Pharmaceutical organizations should study the report and its implications because it will undoubtedly play a part in any form of reorganization of health services to be undertaken by the Federal government.

Meeting of the Council

THE Council of the AMERICAN PHARMACEUTICAL ASSOCIATION will meet in Baltimore on January 16, 17 and 18 to give consideration to routine and special matters in connection with the ASSOCIATION's program for 1953.

The date and place of meeting were selected so that members of the Council could join in the ceremonies incident to the dedication of the Kelly Memorial Building. Dr. E. F. Kelly was secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION from 1926 to 1944, and the ASSOCIATION contributed substantially to the fund for the erection of the memorial in his honor. The building is on the Baltimore City campus of the University of Maryland's professional schools and very close to the College of Pharmacy of which Dr. Kelly was Dean prior to becoming the first full-time secretary of the A.PH.A.

By Esther Hall†

EMPLOYMENT ATTITUDES OF OUR SENIORS*

What does the pharmacy graduate see as he looks out into the future from the vantage point of his senior year? As an aid to our seniors, as well as to those who will employ them, Mrs. Hall reports on a survey made last year.

THE many facets of the profession of pharmacy from a national outlook have been surveyed recently by the Department of Labor Bureau of Labor Statistics. The results of this survey are encouraging to the highly specialized graduate of the mid-fifties, in that there are, at present, many and varied opportunities.

The report states that these opportunities may come from the expanding activities in various fields: the number of openings in the field of hospital pharmacy is expected to increase, with the Veterans Administration alone reported ready to employ as many as one hundred additional pharmacists; increased need for pharmacists in the Armed Forces; additional teaching personnel for colleges of pharmacy; increased demands for pharmacists in the law enforcement agencies; in publication where editing requires the background of a person who is pharmaceutically trained.

These and other immediate needs are further added to by some long-range opportunities, such as the increase in the study of geriatrics which will affect population growth; extension of prepayment plans for medical care; Government provision of medical services for veterans and for members of the Armed Forces and their families; the continued expansion in the research programs, both in industry and by the numerous foundations, brought about by the endless search for new drugs; and the medical progress of the atomic energy program.

What is the attitude of the graduating pharmacy senior in face of this arsenal of opportunities in the profession of his choice?

To secure the answer to this question, so vital to the profession as a whole, the University of Texas College of Pharmacy has conducted a questionnaire-interview survey, which began in the Fall of 1947 and has been continued from year to year, to include the present June 1952 graduating class.

This survey, which was entirely voluntary, has included some four hundred out of seven hundred and seventy-two students who have received the bachelor of science degree in pharmacy from the University of Texas College of Pharmacy since the Fall of 1947.

The survey results are given in Tables I, II and III.

This information is particularly significant, inasmuch as the Texas Pharmacy Law governing the registration of pharmacists is so worded that students, upon graduating with a bachelor of science degree in pharmacy from an accredited institution, are eligible to stand the state board examination and are registered as practicing pharmacists, usually within six weeks after graduation.

The University of Texas maintains a student employment bureau on the campus, as a service to all students enrolled. Placement in the College of Pharmacy, since 1950, has been a separate entity, yet there is close cooperation between the college and the bureau. A member of the faculty of the college of pharmacy is a member of the general faculty committee concerned with student employment and in this way remains in touch with the campus-wide employment problems.

* Presented before the Section on Pharmaceutical Economics, A.Ph.A. Convention, Philadelphia, Pa., August 1952.

† Assistant Professor of Pharmacy Administration, University of Texas, School of Pharmacy, Austin, Tex.

TABLE I.—BACHELOR OF SCIENCE DEGREES IN PHARMACY CONFERRED BY THE UNIVERSITY OF TEXAS COLLEGE OF PHARMACY, AUSTIN, TEX. (SEPTEMBER 1947–JUNE 1952)

	Men	Women	Total
1947–48	138	16	154
1948–49	203	22	225
1949–50	162	14	176
1950–51	115	8	123
1951–52	88	6	94
Total	706	66	772

TABLE II.—SALARY REQUESTS BY GRADUATING SENIORS IN PHARMACY*

Group	I ($300–325)	II ($325–350)	III ($350–400)	IV ($400–500)	V (Undecided)
1950	9%	41%	47%	13%	....
1951	11%	37%	43%	9%	....
1952	4%	6%	9%	36%	45%

* The University of Texas College of Pharmacy, Austin, Tex.

TABLE III.—RECORD OF EMPLOYMENT CHANGES BY GRADUATES OF THE UNIVERSITY OF TEXAS COLLEGE OF PHARMACY, AUSTIN, TEX. (JANUARY 1948–JUNE 1951, AS OF JUNE 1952)

	Graduates	Graduates making change	Employment Change per Graduate	Employment Changes
1947–48	154	37	21 14 2 0 0	55
1948–49	225	60	35 18 7 0 0	92
1949–50	176	56	23 23 9 0 1	101
1950–51	123	63	38 24 1 0 0	89
Total	678	216	117 79 19 0 1	337

In the College of Pharmacy, the undergraduate students are contacted in the senior year and all the necessary information is obtained in order for the college to know the particular type of employment sought by the individual student. Those students who are interested in sales work or in pharmaceutical manufacturing are interviewed by the respective personnel of the companies with whom they wish to affiliate. Interviews are arranged upon request, giving the students a chance to be interviewed by the representatives of the various companies. The larger drug concerns interested in employing pharmacists or pharmacist-managers send their district manager to the campus and interviews are likewise arranged. The independent drug store operators usually address their communications to the Dean or some member of the faculty, with a request that a notice of the opening be placed on the college bulletin board. Any further inquiry is made by the student direct with the employer, unless the independent operator specifically requests that interviews be arranged.

The College of Pharmacy keeps an alumni record of all graduates, showing changes of address and employment, and an evaluation record given the graduate by the faculty adviser on the following: accuracy, school honesty, professional skill; dependability, attitude, cooperativeness, intelligence, courtesy, cheerfulness; neatness, perseverance, tactfulness. These in addition to a scholastic record are kept in a permanent file on the graduate. The employer is privileged to make inquiry relative to the record of any graduate, and in turn guidance is offered to the graduate concerning any employment under his own consideration.

Since 1950, a total of over four hundred inquiries have been received in the College of Pharmacy for pharmacists. At least one-fourth (100) of these since January 1, 1952. Notices were received this year from as many as ten different colleges of pharmacy offering fellowships for advanced study in the various fields of pharmacy with compensation at the average of around $1200 per year. Requests for teachers in pharmacy were received from five different institutions in the United States, and one from a foreign country. Notices were received and posted on the bulletin board of openings in the Veterans Administration, the United States Public Health Service, and others. Ten different pharmaceutical manufacturers indicated an interest in employing the pharmacy graduates, six as detail men and four in manufacturing and research.

A study of eighty-seven of these inquiries, which were for prescription pharmacists, revealed that four were from hospital pharmacies, four from chain drug headquarters, with the remaining seventy-nine from independent store operators in Texas and the outlying states of Louisiana, Oklahoma, and New Mexico.

A majority of the independent drug store operators were willing to offer the graduate a salary of $400 per month to start. They asked, in the main, that he be honest, sober, and not feel that he "knows everything" and will be willing to be taught. Some made additional offers that they would, if the graduate proved satisfactory within a given period of time, permit him to buy into the business. A very small percentage,

(Continued on page 48)

By L. F. Tice‡ and R. E. Abrams†

Glycerinated Gelatin as a Suppository Base*

This is one of two papers on the formulation of suppository bases appearing in THIS ISSUE. See page 26 for Carbowax formulations.

Introduction

THE official method for making glycerinated gelatin as given in the U. S. P. (1) is a tedious and time-consuming procedure. The limitations of this method were described by Tice and Moore (2) who also reported a new method for making glycerinated gelatin in which gelatin was dissolved directly in the glycerin without the necessity of first hydrating it with water. In this same paper, Tice and Moore questioned the method given by the U. S. P. (3) for making glycerinated gelatin suppositories and suggested that these could be made much more easily by the direct solution of gelatin in glycerin.

Tice and Abrams (4), in a continuation of this study, published a working formula for the rapid preparation of glycerinated gelatin suppositories at the prescription counter and discussed the need for selecting either a cationic gelatin (Pharmagel A) or an anionic gelatin (Pharmagel B) based on the properties of the medicament to be incorporated in the suppository. Since gelatin derived from an acid-treated precursor is positively charged (cationic) and is usually commercially available at a pH of 3.5–4.5, it has the incompatibilities of both a positive colloid and a weak acid. The authors found that ichthammol suppositories made with it were granular. This is explained by the known incompatibility of ichthammol with acids. Mild silver protein was also incompatible with a cationic gelatin. Here the probable explanation is the formation of a coacervate between the cationic gelatin and the anionic protein present in the mild silver protein. If, however, suppositories containing a quaternary ammonium antiseptic were to be made, an anionic gelatin (Pharmagel B) would be objectionable since it would coacervate with the cationic antiseptic. In most cases, either Pharmagel A (cationic) or Pharmagel B (anionic) may be used interchangeably, but, in some instances, one or the other must be chosen for best results.

In this paper, the authors describe some additional experiments made to determine the stability of suppositories made by this new method and also some experiments carried out to study the influence of the suppository base on the effectiveness of various antiseptics incorporated in the suppository.

Formula and Technique

Medication, the desired quantity	
Distilled Water, *q. s.*, to make.	10% by wt.
Pharmagel A or B.....	20% by wt.
Glycerin.....	70% by wt.

Weigh the desired medication into a tared container, add distilled water to make 10 per cent of the total weight, and dissolve or mix depending upon the solubility of the drug used. Next, add the glycerin and mix well. To the mixture, add the Pharmagel A or B and mix carefully so as not to incorporate air. Now, heat on a water bath until the gelatin is dissolved (about 3 to 5 minutes for a small batch). Pour into chilled non-lubricated molds and allow to stand until congealed (about 3 minutes in a refrigerator).

This formula is given on a percentage basis since the total weight made will vary depending upon the number of suppositories to be made, whether rectal or vaginal, and individual mold variations.

It will be noted that, in the formula given, Pharmagel A or B is specified rather than Gelatin U. S. P. There are two important reasons for this. First, many samples of gelatin in commerce do not meet the standards in the U. S. P. Second, when one uses a product labeled simply, Gelatin U. S. P., there is no easy way of determining whether it is anionic or cationic; the Pharmacopeia recognizes both types in the same mono-

* Presented before the Section on Education and Legislation, A.PH.A. Convention, Philadelpeia, Pa., August, 1952.
† Instructor in Pharmacy, Philadelphia College of Pharmacy and Sciences, Philadelphia, Pa.
‡ Professor of Theory and Practice of Pharmacy and Director of the Department of Pharmacy, Philadelphia College of Pharmacy and Science, Philadelphia, Pa.

graph. It is often essential to know the type of gelatin in order to avoid certain incompatibilities as has been explained.

Experience has shown that the time required to make the suppositories can be shortened even more if a salt water bath is used in heating the mixture rather than a regular water bath. The slightly higher temperature which this produces seems helpful both in reducing the time required and in giving a more transparent product.

As a final comment on the formula given, it should be pointed out that, for some rectal suppositories, it may be necessary to increase the gelatin content from 20 per cent to a total of 25 per cent, replacing 5 per cent of glycerin. Such a change gives a firmer product.

Solution Time

Suppositories made of glycerinated gelatin do not melt at body temperature but slowly dissolve in the secretions or contents of the body cavity into which they are inserted. The solution time varies according to a number of factors; such as, the gelatin/glycerin/water ratio used, the gel strength of the gelatin, and the presence of certain peptizing drugs or chemicals.

(Continued on page 50)

TABLE I.—EFFECTIVENESS OF OIL-SOLUBLE ANTISEPTICS IN VARIOUS SUPPOSITORY BASES ON *S. aureus*

Medication in Suppository Base	Time of Transplants in Minutes*								
	5	10	15	30	45	60	90	120	180
p-Chlorometaxylenol 1:1000 in theobroma oil	+	+	+	+	+	+	+	+	+
p-Chlorometaxylenol 1:1000 in carbowax base	+	+	+	+	+	+	+	+	+
p-Chlorometaxylenol 1:1000 in glycerinated gelatin	+	+	+	+	+	−	−	−	−
Hexylresorcinol 1:1000 in theobroma oil	+	+	+	+	+	+	+	+	+
Hexylresorcinol 1:1000 in Carbowax base	+	+	+	+	+	+	+	+	+
Hexylresorcinol 1:1000 in glycerinated gelatin	+	+	+	−	−	−	−	−	−
Theobroma oil control	+	+	+	+	+	+	+	+	+
Carbowax base control	+	+	+	+	+	+	+	+	+
Glycerinated gelatin control	+	+	+	+	+	+	+	+	+

* Growth = +; no growth = − (after 48 hours at 37° C.).

TABLE II.—EFFECTIVENESS OF OIL-SOLUBLE ANTISEPTICS IN VARIOUS SUPPOSITORY BASES ON *S. typhosa*

Medication in Suppository Base	Time of Transplants in Minutes*								
	5	10	15	30	45	60	90	120	180
p-Chlorometaxylenol 1:1000 in theobroma oil	+	+	+	+	+	+	+	+	+
p-Chlorometaxylenol 1:1000 in Carbowax base	+	+	+	+	+	+	+	+	+
p-Chlorometaxylenol 1:1000 in glycerinated gelatin	+	+	+	+	+	−	−	−	−
Hexylresorcinol 1:1000 in theobroma oil	+	+	+	+	+	+	+	+	+
Hexylresorcinol 1:1000 in Carbowax base	+	+	+	+	+	+	+	+	+
Hexylresorcinol 1:1000 in glycerinated gelatin	+	+	+	+	+	+	−	−	−
Theobroma oil control	+	+	+	+	+	+	+	+	+
Carbowax base control	+	+	+	+	+	+	+	+	+
Glycerinated gelatin control	+	+	+	+	+	+	+	+	+

* Growth = +; no growth = − (after 48 hours at 37° C.).

TABLE III.—EFFECTIVENESS OF WATER-SOLUBLE ANTISEPTICS IN VARIOUS SUPPOSITORY BASES ON *S. aureus*

Medication in Suppository base	Time of Transplants in Minutes*								
	5	10	15	30	45	60	90	120	180
Nitromersol 1:1000 in theobroma oil	−	−	−	−	−	−	−	−	−
Nitromersol 1:1000 in Carbowax base	+	−	−	−	+	−	+	−	−
Nitromersol 1:1000 in glycerinated gelatin	+	+	+	+	−	−	−	−	−
Phemerol 2.4% in theobroma oil	+	+	+	+	−	−	−	−	−
Phemerol 2.4% in Carbowax base	−	−	−	−	−	−	−	−	−
Phemerol 2.4% in glycerinated gelatin	−	−	−	−	−	−	−	−	−
Theobroma oil control	+	+	+	+	+	+	+	+	+
Carbowax base control	+	+	+	+	+	+	+	+	+
Glycerinated gelatin control	+	+	+	+	+	+	+	+	+

* Growth = +; no growth = − (after 48 hours at 37° C.).

by W. H Hassler† and G. J. Sperandio‡

The Formulation of a Water-Soluble Suppository Base*

Another paper on the formulation of suppository bases appears in THIS ISSUE. See page 24 for glycerinated gelatin formulations.

Introduction

SUPPOSITORIES are conveniently shaped, usually medicated solids which melt at body temperature or dissolve in the mucous secretions and are intended for introduction into the various orifices of the body (other than the mouth). In modern therapy the use of suppositories is limited almost exclusively to the vagina and rectum.

Suppositories are used for two purposes: to produce a local effect or to provide a systemic effect. An exception is glycerin suppositories which through their irritant action produce evacuation of the bowels.

The effectiveness of medication administered by suppository for both local and systemic action is largely dependent upon the base used. For systemic effect, the drug must be in a readily absorbable form and should come in close contact with the mucosa (1). When local action is desired, a prolonged and intimate contact with the mucosa is necessary.

The United States Pharmacopeia XIV recognizes three vehicles for use in the preparation of suppositories: cocoa butter, sodium stearate, and glycerinated gelatin. Although glycerinated gelatin is finding increasing use, cocoa butter is still the most common suppository base because it fills the requirements to the greatest degree (2).

Modifications and additions to cocoa butter have been made by many researchers to improve its drug-carrying ability, its capacity for taking up liquids, and its temperature resistance.

From time to time new materials have been suggested for suppository bases. Bird (3) developed a substance called Monolene (stearic acid ester of propylene glycol) which possesses several advantages over cocoa butter as a suppository base. Other materials which have been proposed as suppository bases are cocoanut stearin, hydrogenated peanut oil, mixtures of oleic and stearic acids, and combinations of spermaceti and olive oil. None of these has won general favor.

Another substance which has been proposed as a suppository base was introduced in Germany under the name of Postonal (4, 5, 6). This substance is known in France as Scurol and in the United States as Carbowax, and is formed by the polymerization of ethylene oxide in long chains, the resulting compounds differing in physical properties according to their molecular weights (7). The polyethylene glycols have the general formula $HOCH_2(CH_2OCH_2)_xCH_2OH$. Those with average molecular weights ranging from 200 to 700 are liquids, and those above 1000 are wax-like solids. These compounds dissolve in water to form transparent solutions and are soluble in many organic solvents. They do not hydrolyze or deteriorate, and will not support mold growth. Their water-solubility, vapor pressure, hygroscopicity, and solubility in organic solvents decrease with increasing average molecular weights.

Cheymoul, Buffet, and Lechat (8) reported Postonal a satisfactory base for suppositories. Gillham and Tomlinson (7) used a Carbowax base to prepare penicillin and sulfathiazole suppositories. Although at the present time no information has appeared in American journals regarding Carbowax as a suppository base, proprietary products are appearing on the market in which Carbowax compounds are being used in suppositories and patents have been issued. G. D. Searle and Company have been issued U. S. Patent No.

---

* An abstract from a thesis submitted by W. H. Hassler to the Graduate School of Purdue University in partial fulfillment of the requirements for the Degree of Master of Science. Presented before the Section on Practical Pharmacy, A. PH. A. Convention, Philadelphia, Pa., August, 1952.

† Present address: University of Tennessee School of Pharmacy, Memphis, Tenn.

‡ Assistant Professor of Pharmacy, Purdue University. Lafayette, Ind.

2,538,127 covering suppository bases. The bases patented by this Company combine one of the higher molecular weight polyethylene glycols with a fatty substance which melts at approximately body temperature. By combining the two, the suppositories soften in the rectum but remain sufficiently hard at normal room temperature to assure safe storage without refrigeration. Carbowax 4000 and 6000 are not absorbed from the gastro-intestinal tract and the Carbowaxes have been reported non-toxic (9, 10, 11).

The Ideal Suppository Base

In listing the desirable characteristics of a suppository base two different aspects should be considered: formulation of the base and absorption of drugs from the base. From the standpoint of formulation the ideal suppository base should:

(1) Be stable.
(2) Pour easily.
(3) Set up in mold quickly.
(4) Not require greasing of the mold.
(5) Have good appearance.
(6) Be easy to remove from the mold.
(7) Not be necessary to refrigerate.
(8) Be compatible with all medication.

From the standpoint of drug absorption from the base it should:

(1) Be neutral in reaction.
(2) Be non-irritating.
(3) Present the drug in a readily absorbable form.
(4) Completely melt or dissolve within 30 minutes.
(5) Not leak from the rectum.

Experimental Formulation

In the literature previously cited no mention was made of the solution time, absorption rate, compatibility, or stability of Carbowax when used as a suppository base. It was thought that if a blend of the different Carbowaxes could be compounded into a base that would resist room temperature and still assure a drug being absorbed from this base, it would find practical application. Three formulas were chosen from a total of 28 as being satisfactory for a suppository base.

The three satisfactory formulas, differing in water content and hardness, follow:

Formula No. 1

Carbowax 4000	33%
Carbowax 6000	47%
Water	20%

Formula No. 2

Carbowax 1540	33%
Carbowax 6000	47%
Water	20%

Formula No. 3

Carbowax 1540	33%
Carbowax 6000	47%
Polyethylene glycol 400	20%

The solution time for the three bases varies from 25 to 30 minutes. The solution time was established by dropping a suppository in four ounces of water at 37° C. The water was slowly stirred to maintain an even temperature.

Stability of the Water-Soluble Suppository Base

When formulas 1 and 2 were used it was necessary to store them in air-tight containers to prevent the loss of water. Formula 3 may be stored in any type of container, since polyethylene glycol 400 is used in place of water, and the suppositories are quite stable.

(Continued on page 54)

TABLE 1.—ABSORPTION OF BARBITURATES FROM SUPPOSITORY BASES

Drug	Number Animals	Sex	Weight, Gm.	Dosage, Mg./Kg.	Base	Onset* Minutes	Duration* Minutes
Amytal Sodium	10	M	150	100	Water-Soluble	15.8 ± 0.61	103.7 ± 2.87
Amytal Sodium	10	M	150	100	Cocoa-Butter	7.4 ± 0.4	56.5 ± 2.71
Nembutal Sodium	10	F	150	50	Water-Soluble	12.6 ± 1.1	262.9 ± 6.1
Nembutal Sodium	10	F	150	50	Cocoa-Butter	7.5 ± 0.27	121.1 ± 13.9
Seconal Sodium	10	M	150	70	Water-Soluble	10.2 ± 0.36	153.8 ± 16.9
Seconal Sodium	10	M	150	70	Cocoa-Butter	6.2 ± 0.39	72.0 ± 3.7

* Standard error derived by the formula: $\sqrt{\frac{ed^2}{n(n-1)}}$.

what the pharmacist should know about

By Edward P. Claus†

While spring and fall are recognized as the seasons of greatest allergic manifestations, many common allergies are of year-round concern to millions of people.

"What is meant by a pollen count of 112?" Have you ever been asked that puzzler by one of your customers, particularly in August or September? If so, perhaps you have been able to answer that it represents the number of ragweed pollen grains occurring on a given area of an exposed atmospheric slide. If your customer then queries "How are pollen counts made?" or "Why don't the newspapers publish the pollen count in June or July?" or "Does hayfever have any relationship to asthma, hives, or dermatitis?," you may find yourself in a predicament unless you have become acquainted with the subject of allergy in general.

A Common Condition

It has been estimated that almost half of the people in the United States suffer from an allergy of one sort or another. Only 10 per cent of these cases, however, are sufficiently severe to require medical treatment. Do you know of anyone who becomes violently ill every time he or she has eaten oysters, clams, lobster, shrimp or other types of shellfish? Are you acquainted with a person whose upper lip swells to twice its normal size when he indulges in chocolate or cocoa? These persons seldom visit a physician for their food allergies. Instead, they have learned the hard way through "trial and error" that they must avoid these foods.

Do you or members of your family suffer from a "head cold" in March, April or May which lasts a week or two and does not respond to the usual cold remedies? If so, you are probably allergic to one of the trees which blossoms and sheds its pollen in early spring. The same condition applies to what is called "rose fever" in June, except that, in this instance, the offending pollens are liberated by grasses.

Since your customers generally tell you (and everyone else) their allergy troubles, it might be well to consider the various types of allergies and to discuss the methods of detection and treatment employed by physicians.

Definition

Allergy may be defined as an unusual response in an otherwise normal individual to a foreign

---

Presented before the Section on Practical Pharmacy, A. PH. A. Convention, Philadelphia, Pa., August, 1952.

† Professor of Pharmacognosy, University of Pittsburgh, School of Pharmacy, Pittsburgh, Pa.

substance of a protein nature. This allergic tendency is hereditary being transmitted from one generation to the next. The foreign protein, when it contacts the cells and tissues of the body, acts much like any antigenic material (for instance, diphtheria toxoid) and causes the formation of antibodies. However, instead of these being of a protective nature, they become fixed to the tissue cells in susceptible persons. This is called the sensitizing exposure. Then, when the same antigen again invades the body, the union of antigen and antibody causes a liberation of histamine, or a histamine-like (H-like) substance, in those tissue cells. This is called the illiciting exposure.

Histamine release produces symptoms of hayfever, asthma, dermatitis, hives, or other uncomfortable effects. The areas are called "shock tissues" or "shock organs" and may involve the skin, nose, eyes, gastro-intestinal tract, lungs, or other parts of the body. The reaction is called an antigen-antibody response and forms the basis for all allergies.

Allergenic substances are usually referred to as allergens and are materials which may cause any of several types of allergenic reactions. They are classified according to the manner in which they enter the human body: (1) *inhalants*, which enter through the nasal passages; (2) *ingestants*, which are swallowed; (3) *injectants*, which are introduced parenterally; and (4) *contactants*, which must touch the epithelial tissues.

Inhalant allergens are responsible for hayfever and certain types of asthma. Hayfever is seasonal when it occurs at a definite time of year. For example, ragweed hayfever, representing 90 per cent of all cases, is prevalent in the Middle Atlantic states from the beginning of August until the middle of October. Seasonal hayfever is caused by wind-borne pollen grains and, thus, is called pollinosis. Trees such as elms, poplars, walnuts, and oaks cause early spring hayfever; grasses such as Kentucky bluegrass, orchard grass, timothy, and redtop produce early summer hayfever; and weeds such as the ragweeds, pigweed, sorrel, and marsh elder are factors in late summer and early fall hayfever. Non-seasonal hayfever occurs at any or all times during the year and is due to mold spores, dust, cotton fibers, kapok, animal dander, hair, feathers, perfumes, or innumerable other air-borne substances which may be inhaled.

The study of aerobiology is concerned with the content of the atmosphere. By exposing greased microscope slides in a prescribed manner for a twenty-four hour period, the type of aerobiological matter can easily be examined microscopically. The atmospheric pollen counts are determined by identification and compilation of the number of pollen grains on one square centimeter of slide surface. However, if the ragweed pollen count is published in the daily newspaper, it should be remembered that it represents a time interval of twenty-four hours and also that the count was probably made from four to twelve hours before publication time. Thus, except for the tabulation use of these reports, they are of little value for public information except to corroborate the severity of the reader's hayfever symptoms which he suffered the day before he read the newspaper. Actually most allergists prefer that no publicity be given to pollen counts, but newspaper editors insist that their readers desire the information.

Ingestant Allergens

Ingestant allergens are representative of a great variety of foodstuffs: cow's milk, wheat flour, eggs, orange juice, tomatoes, chocolate, shellfish, peanuts, pork; in fact, almost any food may be allergenic to hypersensitive individuals. The old saying "One man's food is another man's poison" may have originated from an early observer in the field of allergy! Skin eruptions, hives, urticaria, headache, nausea, gastro-intestinal disturbances, swelling of the lips and tongue, as well as emesis may be symptoms. Most persons who are allergic to certain foods soon learn to avoid them. Of course, not all foods produce drastic reactions in susceptible persons; some foods cause only a slight disturbance. A food allergy has been known to exaggerate symptoms of hayfever, or vice versa—these are known as synergistic allergies.

Injectant Allergens

Injectant allergens are too well known to discuss in detail. Allergic responses to penicillin injections, to injections of antitoxins or anti-bacterial sera, to liver injections, and to injections of hormones often produce either localized or generalized symptoms. The allergic individual has evidently been sensitized to the offending allergen at some earlier time. Similarly, previous sensitization is a forerunner of contact allergy. Poison ivy, poison oak, poison sumac, and many other plants are capable of eliciting skin irritation or dermatitis. Additional contactants are: wool, feathers, chalk dust, paint, shaving lotion, hair tonic, per-

(Continued on next page)

Allergy

• • • • • • • • • • • • • *from preceding page*

fumes, and cosmetics in general. The hypoallergenic cosmetics now widely advertised depend upon the elimination of certain known allergenic substances from their formulas.

What Can Be Done?

What can the hypersensitive person do for his allergy? First of all, a reputable allergist will record a complete history of the case. Then he will administer determinative skin tests to identify the specific allergen causing the sensitivity. Skin tests are performed by scratching or injecting a small amount of an extract intracutaneously. Extracts are made in a number of ways using suitable solvents as described in the September, 1945, edition of THIS JOURNAL.[1]

The allergist reads the skin tests as negative, 1-plus, 2-plus, 3-plus, or 4-plus. The latter is the most severe type of reaction and is characterized by an erythematous swelling called a wheal. Skin tests are of indisputable value in all cases of allergy with the possible exception of food allergies. Some individuals may exhibit a positive reaction to a food extract but suffer no noticeable symptoms when the food is eaten. The causes of seasonal as well as non-seasonal hayfever may be determined by skin tests. A cautious physician, before injecting penicillin preparations, will resort to a skin test using the same material to ascertain whether the patient will tolerate the injection. Skin tests usually require about ten minutes for completion.

Hyposensitization treatment may be administered by the allergist following the determination of the specific allergen. Here, a minute quantity of the same extract used in making the diagnostic skin test is injected at weekly or biweekly intervals. The dose is gradually increased at each injection until the patient develops a tolerance to a definite amount of antigen. This type of treatment was formerly called the desensitization method, but that name has been abandoned in favor of the term "hyposensitization" since 100 per cent freedom from symptoms is seldom attained. Hayfever is combatted by this technique; the treatment is preseasonal, co-seasonal, or perennial according to the duration. Hyposensitization injections are less successful for food allergies; instead, elimination diets are more important. Similar injections are useful for contact allergies although uniform results are not always obtained.

The Antihistamines

The many antihistamine drugs which are sold either on prescription or over the counter will provide relief in some cases of allergy, particularly the inhalant type. However, it should be remembered that antihistamines do not prevent the antigen-antibody response—they merely block the injurious effects of histamine. Thus, it is not advisable for a patient to continue using the antihistamine promiscuously without a physician's advice. If the antigen-antibody reaction continues over a period of years, partially alleviated only by self-medication with antihistamines, ephedrine or other drugs, larger and larger amounts of the drug may be employed by the allergic individual. Often, severe asthma or other complications result because of the unchecked underlying mechanism.

If you are asked by a physician to suggest an antihistamine which is more advantageous than the one he is currently using, your knowledge of organic chemistry will be of assistance. A knowledge of trade names is of little help in this instance since many trade products merely duplicate each other. Frequently, an antihistamine of the ethylenediamine type will prove more effective than one of the alkanolamine type.

The Pharmacist's Role

Because of your understanding of the subject of allergy you will be able to supplement the information which the patient gains from his physician. You may be asked about skin tests, elimination diets, seasonal and non-seasonal hayfever, contact dermatitis, and even eradication of poison ivy plants. You may be expected to explain the advantages of hyposensitization over the continued use of antihistamines. The manner in which you answer these questions will indicate to your customers whether you are "in the know" about allergy.

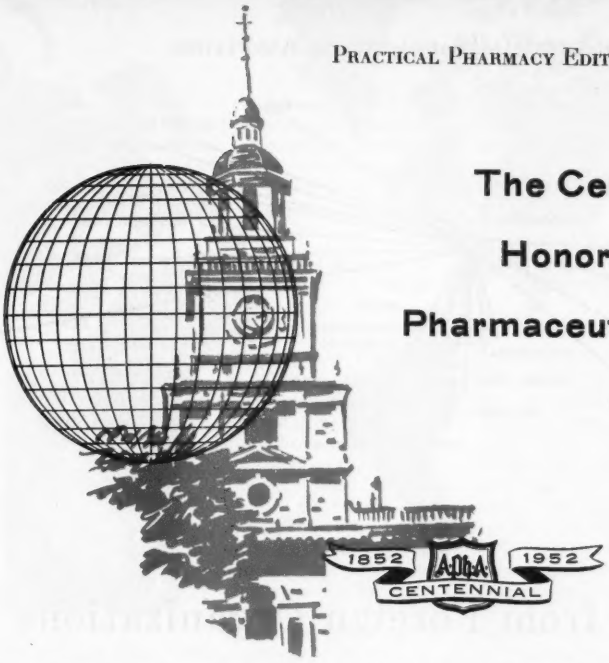
If you wish more information on this subject, here are several authoritative yet easy-to-read books:

Durham, O. C.: "Your Hayfever" (Bobbs-Merrill Company, Inc., Indianapolis), 1936.

Feinberg, S. M.: "Allergy in General Practice" (Lea and Febiger, Philadelphia), 1934.

Vaughan, W. T.: "Primer of Allergy," 3rd ed. (C. V. Mosby Company, St. Louis), 1950.

[1] Gibson, A. J., and Bossbach, A., THIS JOURNAL, 6: 244 (1945).



Proceedings of The Ceremonial Session Honoring the American Pharmaceutical Association, August 20, 1952

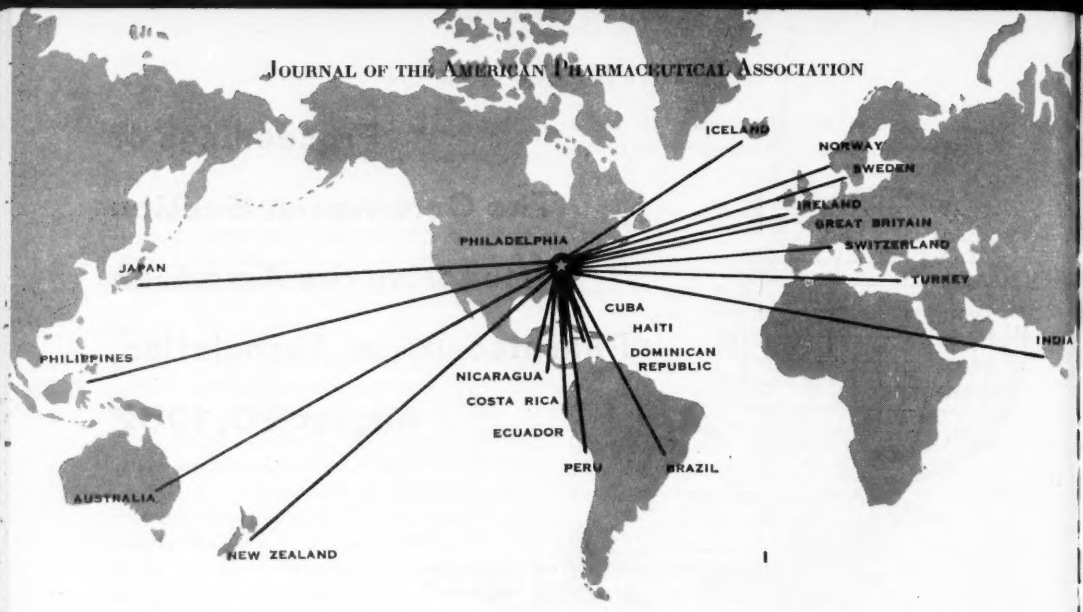
THE Ceremonial Session of the Centennial Convention has been reported in news-story fashion in preceding issues of THIS JOURNAL, and by the other publications serving pharmacy. However, the complete texts of the Greetings and Responses delivered on that occasion have been held until this time, as a fitting note on which to begin the second century of progress of the AMERICAN PHARMACEUTICAL ASSOCIATION and the profession it serves. On the following six pages, these brief addresses are presented in full. The major address delivered that afternoon, "Values That Endure in the Practice of Pharmacy," by Dr. Ivor Griffith, president of the Philadelphia College of Pharmacy and Science, was printed in the November issue of THIS JOURNAL. A segment of the Invocation, delivered by Reverend Elof F. Johnson, Curate, Church of the Redeemer, Bryn Mawr, Pennsylvania, served as the cover of the November issue of THIS JOURNAL. Dr. Don E. Francke, then president of the ASSOCIATION, presided.

The Ceremonial Session opened with an Academic Procession, as the nearly two hundred representatives of national and international pharmacy entered the ballroom and took their places in the front of the room. Following the National Anthem and Invocation, Dr. Francke read the letter commending the ASSOCIATION from President Harry S. Truman which was reproduced on the cover of the August issue of THIS JOURNAL. Dr. Francke then introduced Dr. Paul S. Pittenger, vice-chairman of the Committee on Centennial Celebration, and he in turn introduced the guests who came forward to present their scrolls and other forms of greetings to Dr. Francke. Representatives of foreign organizations were introduced first, and following the presentation of their inscribed greetings, Mr. W. R. Cutler spoke in behalf of all of them. Dr. George D. Beal, then chairman of the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION, responded to these greetings in behalf of all members of the ASSOCIATION.

When Dr. Beal concluded, Dr. Pittenger then called the names of the domestic delegations, and they too presented their greetings. Dr. Malcolm T. MacEachern brought greetings in behalf of all the organizations in a brief address, and Dr. Leonard A. Scheele spoke for the various agencies of the Government of the United States. Dr. Robert P. Fischelis responded to both of these greetings.

Following the presentation of scrolls, Dr. Griffith delivered his address, and after benediction, the Ceremonial Session closed with a Recessional, as the delegates left the ballroom. The addresses of Mr. Cutler, Dr. Beal, Dr. MacEachern, Dr. Scheele, and Dr. Fischelis appear on the following pages, in the order of their delivery.

The Assembled Representatives of Foreign and Domestic Organizations.



GREETINGS from Foreign Organizations

by W. R. Cutler

PRESIDENT, PHARMACEUTICAL ASSOCIATION OF AUSTRALIA AND NEW ZEALAND

Mr. President, Members of the Council, Members of the American Pharmaceutical Association, Ladies and Gentlemen: On this solemn yet happy occasion, it is my honor and privilege to convey to pharmacists throughout America greetings from pharmacists from twenty overseas nations. I deem it a great honor and privilege to be the one selected to be their spokesman.

I come from one of the youngest nations of this world—youngest but, I say with some degree of pride, not the least.

We have come to pay our tributes and our honor to your Association. We, first of all, pay our homage to the pioneers who founded your organization some hundred years ago. They laid down the basic principles and the precepts which you people have so ably followed; nay, I would say you have improved. You have brought them right up to the present period, and fitted these precepts in with changing conditions and the advancement of pharmacy, but still adhering to those sound, essential and basic conditions laid down by your pioneers. For that, we, my distinguished colleagues and myself from overseas, congratulate you all.

May we offer you our felicitations on your hundredth birthday? May we wish that you go on from strength to strength; that those principles will be amplified, if humanly possible, and that pharmacy will be a power greater even than now in this great country of yours.

The privilege you have extended to me today is rather unique in this regard, that whilst I am an Australian, by birth I am an Englishman. And coincidental to the fact, I was born in a town in England some two miles from the birth place of the founder of this state—William Penn. I am very pleased to have that unique honor.

I would like to state that in examining the objectives of organizations built on a similar pharmaceutical plane to yours, I discover that the basic principles are almost parallel. We are actuated by the same motives throughout the democratic world. We are actuated by the principle of, first of all—and I state it with no fear of contradiction—service to the public and the cause for health. That is the fundamental of pharmacy. I think it will always keep the pharmaceutical status if we maintain that principle always in our minds.

Now, as I mentioned before, there are twenty nations participating in your centenary convention. I might even say you have a League of Nations of Pharmacy here, and it is a golden opportunity for us people from overseas to absorb and investigate your methods of teaching our honorable profession, and for which I will now at this moment pay heartiest thanks to all those who have assisted to make our task in this regard so easy.

I feel that we have a lot to do. We have common ground the world over to explore pharmacy's place in the health of the respective nations which we represent. I feel we are only on the threshold of it; and by doing that, by giving service to others, we enhance our status and our respect in the eyes of all. We must work in close liaison with the medical profession in the furtherance of this object and keep in mind, as I mentioned before, our duty to the public of our respective nations. By doing so,

pharmacy will assist the common good and assist and make its place in the objective of world peace.

On behalf, once again, of these twenty nations assembled here, men who I am proud to know as brother pharmacists and who we are proud to greet with you all as brother and sister pharmacists, I offer you once again our hearty felicitations on this great occasion, this great celebration, and congratulate you for your projects for the future.

May I express one final hope, that with the aid of our mighty Creater, pharmacy will take its place in ushering in the thousand years of peace.

RESPONSE by George D. Beal

CHAIRMAN, COUNCIL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

I ADDRESS myself this afternoon to our distinguished guests and associates from without the United States of America. Nearly three thousand years ago the Psalmist said, "The days of our years are three-score years and ten." Not even the most recent achievements of pediatrists and geriatrists have made it possible for a person to participate actively in planning and celebrating two successive centennial celebrations of one event. We must therefore make the most of this occasion. Hence, every member of the AMERICAN PHARMACEUTICAL ASSOCIATION today, whether he be in this room or at his duties elsewhere, feels a thrill of participation in this Centennial observance, and welcomes you, and thanks you for your congratulations and your good wishes.

Every explorer plans to have with him on his travels some means for healing, and, if possible, someone skilled in that art. When Christopher Columbus set out for the Indies four hundred and sixty years ago, he had a fleet surgeon, whose name, however, is lost to history. But he and his successors took back home such information about medicinal plants of the western hemisphere that a treatise on the drugs of the "New Indies" could be published in Seville in 1545.

Samuel de Champlain was accompanied on his first voyage to New France in 1604 by a Parisian apothecary, Louis Hebert, whose activities in the development of the French colonies of North America caused him to be regarded, next to Champlain himself, as the father of New France. The Sisters of Charity, and the fathers of the Society of Jesus, played an important part in the establishment of the first medical, pharmaceutical and hospital services in the new world.

Before the attempt to establish the Viriginia colony, Bartholomew Gosnold with his crew loaded and carried to England by ship a cargo of sassafras wood and pith in 1602. The surgeon Gysbert Van Imbrock "kept a shop at New Amsterdam" in 1653, and, while it is not known today whether it was the equivalent of a drugstore or the shop of a surgeon and barber, he has been mentioned in literature as the local physician and pharmacist. And in 1770 the Spanish governor of the Louisiana Territory issued an edict in which he defined the professions of medicine, surgery, and pharmacy.

The practice of pharmacy, research in pharmacy, and the regulation of pharmacy are international in their scope. The colonists brought to North America a materia medica containing many valuable drugs, but from this hemisphere there went back at least two new drugs, cinchona and coca, that caused revolutionary changes in the practice of medicine and surgery. The earliest researches in pharmaceutical chemistry were carried on in Europe, and the oldest of the chemical journals began as a journal of pharmacy; I refer, of course, to Liebig's "Annalen." The first regional pharmacopeias in the United States, pointing the need for and the way to the United States Pharmacopeia, were modeled upon the famous Edinburgh Pharmacopoeia. The strength of pharmacy as a profession has derived from a community of professional thought throughout the civilized world.

Although we have developed a practice of pharmacy of our own, our practitioners are a product of that great melting pot fed by all European nationalities. We can connect various stages in our pharmaceutical development with political or economic movements that provoked emigration to the United States. The names above our doors, the rosters of our faculties, and the rolls of our graduating classes bear evidence of whence we came.

Probably we differ from you in many of our practices. Because our cities and our homes are a product of comparatively few years, we do not have hereditary locations but have more recently located for business advantage; and because we are not so closely bound by tradition, we have not always been able to resist some economic pressures. But we have developed and extended ourselves to meet our own needs, and we believe that we have made our pharmacist as much a part of our community as the chemist or apothecary is of yours.

People have come to North America to make a home. They began to build around themselves the things associated in their minds with home, the meeting places, the churches and the schools. When the pioneers traveled inland to clear land for new homes, the father and the mother first had the responsibility of keeping up family morals, but the preacher and the teacher kept almost within sound of the rifle and the axe. We had to develop a civilization in this country, but you had already given us a pattern of successes to emulate and of mistakes to avoid. Much of the experimental work of civilization had been done. We have derived from you much of our experimental science and many of our traditions. Together we have worked in the interests of pharmacy the world over. For all that you have given to our profession in America, we thank you, and in return we hope that our novel experiences will be of some assistance to you.

Greetings from Domestic Organizations

By Malcolm T. MacEachern

DIRECTOR OF PROFESSIONAL RELATIONS, AMERICAN HOSPITAL ASSOCIATION

WE ARE assembled here today to pay grateful homage and worthy tribute to a great professional organization, the AMERICAN PHARMACEUTICAL ASSOCIATION, for its century of service to humanity.

I am honored and privileged to acknowledge on behalf of the seventy-five associations in the health field of the United States of America represented here today, the tremendous contribution which the AMERICAN PHARMACEUTICAL ASSOCIATION has made to the health and longevity of the people of this great nation, and indeed, of people all over the World.

This is a solemn and happy historic occasion marking a century of progress in health in which the organization we are honoring today has played a most important role. I accept my task with the profound humility one always feels in the presence of greatness, whether individual or collective.

This ceremonial is a real life drama—the kind of drama that is a spur to progress. It took a hundred years to set the stage for this play in which we are actors and audience today. The obviously successful result is the fruit of a hundred years of team work. In no other way than through an association could Pharmacy have traveled so far in a century. Pooled energies were necessary to enable presentation of this drama, a production that reflects the actual heights to which the profession has risen.

On this occasion, as I look over this brilliant audience, there comes to my mind a statement made in 1945 by Doctor Earl R. Serles, then president-elect of this great ASSOCIATION. Doctor Serles said:

The practice of pharmacy has passed through many trials and tribulations and even yet, too few of the public or even pharmacists themselves are sufficiently conscious of the importance and dignity of Pharmacy as a profession.

But this ceremonial occasion, and we who are so impressed by it, attests to the importance and dignity of Pharmacy as a scientific profession. And that is what it should be. The stature of a profession grows when it forms an association and conducts its activities for the good of the public and the elevation of its own standards. To these noble purposes the AMERICAN PHARMACEUTICAL ASSOCIATION has always subscribed and is worthy of the highest degree of public recognition and gratitude.

We live in medicine's golden age. The conquest of disease in the last 50 years exceeds all the progress of the preceding 24 centuries. Physicians have done more to lengthen our life expectancy and freedom from serious illness in the past 50 years than has been accomplished in all the 2,400 years between Hippocrates and 1900 A.D., but without the simultaneous progress made by the profession of Pharmacy, little could have been accomplished. In the development of Pharmacy the AMERICAN PHARMACEUTICAL ASSOCIATION has had a major share. Scientific medicine is deeply in its debt. Its purposes, its organization, its membership, and its leadership have been responsible in large measure for the high quality of medicines that physicians are able to prescribe today. The laws that it has sponsored have produced the high degree of security and protection from quackery and nostrums that the public of this and other nations now enjoy.

It is an inspiration to a group of workers just to give deep thought to its goal. I am greatly impressed by the first stated object of the ASSOCIATION:

To improve and promote the public health by aiding in the establishment of satisfactory standards for drugs, and to aid in the detection and prevention of adulteration and misbranding of drugs and medicines, and to take such steps as an Association and in cooperation with other organizations as will assure the production and distribution of drugs and medicines of the highest quality.

I am also moved by its second object, which is:

To foster and encourage interprofessional relations to the end that pharmacists, physicians, and members of other allied professions may contribute to the promotion of public health and welfare in fullest measure.

The other objects of the AMERICAN PHARMACEUTICAL ASSOCIATION are of the same tenor and I mention to you again that this progressive and cooperative spirit has been an active and potent force in the development of our present health standards. Hospitals are recognizing the growing importance of the pharmacy in the quality of their service. For many years, I personally cooperated actively in the formulation of standards for hospital pharmacies and even now the American Hospital Association, with which I am connected, is studying plans for the establishment of an Institute of Hospital Affairs that would be closely related to a university. This Institute which will be devoted to research, education, and service in all hospital activities, is intended to develop better methods of operation and better methods of education and training for those who work in hospitals. It will provide a medium for cooperative action by all groups as represented here. Without question, pharmacists will play a large part in implementing the over-all program of improving patient care contemplated by the Institute of Hospital Affairs.

Everywhere among hospital pharmacists, and I am sure the same thing is true of all pharmacists, I have found an eagerness to improve service to the physician and to the patient. I know of a hospital pharmacy in this very city which issues a monthly mimeographed publication whose main purpose is to call the attention of the medical staff to the excellence of its professional service and to educate them to the fact that the pharmacy is an important source of accurate, unbiased information concerning drugs and rational drug therapy. It has always been my recommendation that the chief pharmacist is an important professional associate who should attend medical staff conferences as he has much to contribute to medical deliberations and may be a potent influence in medical decisions.

It is not only by efforts on behalf of its members that this ASSOCIATION has helped the profession to reach its present high position. There is another outstandingly important factor in its success. It has invited to participate in this Centennial Celebration more than a hundred other associations and agencies, seventy-five of which I represent from the United States in bringing you these greetings. Nor is this an idle gresture. Bringing in these groups is not a last minute, superimposed idea to heighten the drama of this occasion. During all these long years since its founding, the AMERICAN PHARMACEUTICAL ASSOCIATION has worked *with* and *through* these other associations and agencies in America and all over the world. The parts which they play in this Celebration are parts which they have played all along. Cooperation has been, and is, the keynote of this ASSOCIATION'S success. It has operated as a service organization. It has looked beyond its own direct field of interest to work with other groups for the broader objectives of the public welfare.

In telling you this, I speak from my own knowledge and experience. I *know* that the medical profession and all its related organizations, and the hospital field and all the professions and organizations represented therein, have received from the AMERICAN PHARMACEUTICAL ASSOCIATION and its subsidiary groups, cooperation of the highest order through the years. We have worked together with the invaluable help of government agencies to prevent adulteration of drugs; to stimulate research leading to the development of new remedies; to raise standards of education and practice in pharmacy; to combat exaggerated or false claims for the efficacy of drugs; to educate the medical profession in the use of newly developed agents; to promote high advertising ethics; to keep the doctor and the pharmacist constantly working together for the good of the patient.

Because of this effective cooperative effort, it is quite impossible for me to truthfully point out to you the exact accomplishments of the pharmacy profession since this ASSOCIATION was organized a hundred years ago. Joint effort has been responsible for the progress in preservation of lives and control of disease. All of the agencies represented here today and many others have had a part in this progress. It is the crowning achievement of all of us that we have learned in the past century to work together for good. In 1852, when the AMERICAN PHARMACEUTICAL ASSOCIATION was founded, there was no such spirit.

The AMERICAN PHARMACEUTICAL ASSOCIATION was in the vanguard of teamwork effort. At that time not a single state in the union had even organized a Board of Health. Massachusetts created the first one in 1869. The first National Sanitary Convention was held five years after this ASSOCIATION was founded—and it was twenty years after its founding that the American Public Health Association was established. Hospitals were not organized. The American Medical Association had been founded only five years earlier. In the preceding fifty years there had been little advance in health knowledge. Epidemic after epidemic swept the land—typhoid fever, scarlet fever, diphtheria, yellow fever, smallpox, malaria. The tuberculosis death rate in Massachusetts in 1850 was over 300 per 100,000 population. There was no unified effort to combat disease. There was ignorance of the causes of many diseases. Quacks infested the country and drug peddlers, salve dealers, snake oil vendors, and purveyors of magic remedies abounded at every turn.

The chief cause for rejoicing among all of us working in the health field is that we have helped to prolong human life. John Ruskin made a positive statement, the truth of which we do not always appreciate but which is nevertheless self-evident:

"There is no wealth but life"

The most precious thing by far a person has is life and those who can give him added years are his greatest benefactors.

An average lifetime in the old Roman Empire was not more than 25 years. This we know from the findings of students who have studied records and tombstones. Seventeen centuries later we have our next fairly reliable record in the crude mortality table prepared by Halley—this showed 33 years as the average expectation of life at birth in 1691—that means the gain in all those centuries was only eight years. In the next 300 years the gain was increased by sixteen years, so that a white child born at the opening of the twentieth century could expect to live to the age of 49. What we have accomplished in the first half of this century far surpasses all previous gains—we have in *fifty-two years* added *twenty years* to the average life span. Life expectancy at birth is now nearly seventy years. We have gained nearly as many more years of life per person in the last 52 years as in all the preceding twenty centuries.

We in the United States are blessed today with the opportunity to live happy, healthful, and productive lives because of the marvelous advances in medical science in all its phases, preventive and curative. Great discoveries have been made in the past and present. Truly, we can say medical science marches on. No other country has advanced to such a degree as has the United States in health, in scientific medicine, and care of its people. In all this, the organization we are honoring today has played a major role.

I wish that I could speak authoritatively on behalf of each and all the national organizations attending this Celebration, as well as I can in testifying to the cooperation received by the medical and hospital organizations. I am sure, however, that their ex-

(Continued on next page)

(Continued from preceding page)

perience has been the same. Their willingness to send representatives to attend this Celebration personally is an acknowledgment of their active good will and support. All of us are embarked together on the same great mission—to make this golden age of health a continuing and increasingly rich blessing for our people. Looking back, you can be proud of our accomplishments—looking forward, you know that we are but on the threshold of greater achievements.

It is with appreciation of the contributions of the AMERICAN PHARMACEUTICAL ASSOCIATION and of all its components—manufacturers, distributors, research workers, pharmacists, and others—that I bring to this Centennial Celebration the heartiest felicitations of the 86 American associations which are here represented. May this 100th anniversary be a starting point for another century which will rival in success the brilliant one just completed. In extending our congratulations, we pledge to you the most enthusiastic cooperation in making this new century one which will advance to the utmost possible extent the health and welfare of our people.

Greetings from Government Agencies

By Leonard A. Scheele

SURGEON GENERAL, U.S. PUBLIC HEALTH SERVICE

IT IS a great pleasure and privilege to bring the greetings of the Government medical services to the AMERICAN PHARMACEUTICAL ASSOCIATION on the occasion of its one hundredth anniversary. The Public Health Service is proud to join with the Army, the Navy, the Air Force, and the Veterans Administration in congratulating the ASSOCIATION on its century of progress. We would also record our faith in the bright future of pharmacy as a distinguished profession in the health services of a changing society.

The dramatic advances in medical and pharmaceutical sciences within the past decade alone have vastly increased the responsibilities of pharmacists. They have even more strikingly affected the importance of well-planned and administered pharmacy programs in the medical services of Government, as well as in non-governmental medicine, hospitals, and related institutions.

In this connection, the Government services have benefited especially from the leadership of the AMERICAN PHARMACEUTICAL ASSOCIATION in its encouragement and sponsorship of the American Society of Hospital Pharmacists. This lusty child of the AMERICAN PHARMACEUTICAL ASSOCIATION celebrates its tenth birthday this year. Many pharmacists in Government have been active in its growth and development and have profited greatly by the professionalization of governmental pharmacy programs.

Pharmacy has played an important role in Government medical programs from their inception, but it took the impact of World War II and its aftermath to bring about the great strides of the past decade. In this period, the pharmacist has taken his place on the hospital team in the Army, the Navy, the Air Force, the Veterans Administration, and the Public Health Service on an equal footing with other health professions.

Pharmacy committees, including pharmacy officers, are now functioning in the majority of Government hospitals and large dispensaries. In the commissioned services—the Army, the Navy, the Air Force, and the Public Health Service—pharmacist officers are taking on added responsibilities for the professional and management standards of the pharmaceutical services both in hospital and field stations. These same responsibilities are being discharged by the Chief Pharmacist of the Veterans Administration and his professional pharmacy staff.

The aims of the pharmacy programs in Government are to provide improved and efficient service as an integral part of other hospital activities, both in clinical care and management services. To these ends, Government pharmacists have made rapid progress during the past few years. Improved recruitment, expansion of training programs, standardization of formularies, efficient procurement and storage of supplies, and improvement in the operation of pharmacies have been achieved in all Government services. There is no question that these advances have stemmed from the growing awareness in the pharmaceutical profession of the opportunities for public service in Government agencies.

The utilization of Government facilities as graduate training centers in pharmacy has been recognized. Here, too, progress can be noted. This fall, the Veterans Administration is launching its pilot residency program in cooperation with the University of Southern California at the Veterans Administration Center in Los Angeles. In a modest way, the Public Health Service has also entered this field. For the first time, a one-year pharmacy internship has been established at our hospital in Baltimore, Md. Our hope is that we will be able to extend the internship program to other large hospitals of the Service.

Government service offers many other opportunities to pharmacists than the direct practice of pharmacy in hospitals and dispensaries. Basic and clinical research, procurement, hospital administration, and other management services are important areas requiring professional pharmacists. In the

Public Health Service we have two other interesting programs in which pharmacists are participating. The National Hospital Survey and Construction Program, for example, requires pharmacists as consultants in the planning and design of pharmacies for hospitals of varying size and category, and as hospital equipment specialists. Likewise, pharmacists in our Civilian Health Requirements Program, maintain liaison with the pharmaceutical and related industries, as well as with agencies of the Office of Defense Mobilization, and with civilian sources of procurement.

As I said earlier, recent advances in medical and pharmaceutical science have revolutionized therapy. We may expect new advances as striking as those of the last decade within the foreseeable future. Antibiotics, hormonal agents, blood constituents, anticoagulants, antihistaminics, and hematinics are already with us, clamoring for intensive study and evaluation. Possibly as many new agents as we have today are already on the way.

The complex nature of modern therapeutic agents, with the dangers accompanying their indiscriminate use, calls for adequate protection of the public—not only at the point of retail sale across the drug store counter, but also in their use by physicians, dentists and other therapists. Cooperation by the industries, the professional associations, the basic research institutions, the hospitals, and Government is essential for the maintenance of adequate safeguards.

These safeguards can be based only upon existing knowledge—not only of the limitations and potential toxic effects of the ever-expanding therapeutic armamentarium, but also of the human organism and its reaction to its own dynamic processes and to the introduction of new substances. Intensive application of our existing basic knowledge will undoubtedly afford a large margin of safety in the use of new agents. There can be no doubt, however, that science itself is limited in many instances. Basic physiological and biochemical research, coupled with carefully controlled clinical investigations, must be expanded lest our application of chemical science still further outstrip our basic understanding of the human organism.

Pharmacology and practical pharmacy have a vital role to play in the great medical research endeavor of today and tomorrow. Pharmacologists and pharmacists are as essential members of basic or clinical research teams as they are of hospital teams. If the profession is to maintain its hard-won status, however, it must produce a larger supply of graduate research workers, as well as of highly qualified teachers of pharmacy.

A resolution by the National Association of Boards of Pharmacy in 1951 (Res. 3) indicates a laudable recognition of these needs. It calls for greater emphasis upon graduate work leading to the higher collegiate degrees and greater encouragement of Bachelors of Science in Pharmacy to continue into the graduate field.

Pharmacists in the United States share with all our citizens the obligation to think and act not only on a national but also on an international basis. The free nations of the world are dependent on each other, not only in trade and sharing a better life, but also for mutual aid in fighting communism.

The World Health Organization, with United States' participation, has become the agency through which 70 of the world's free nations work to improve international health. The ultimate goal for all peoples is health as defined in the constitution of the WHO: health as "a state of complete physical, mental, and social well-being, and not the mere absence of disease or infirmity."

The WHO has acquired the responsibility for international drug and biological standardization and development of an appropriate pharmacopeia. It has taken over the functions originally described in the Brussels Treaty of 1929 for the unification of the formulas of potent drugs. With United States' technical participation, it has recently produced the first volume of the First International Pharmacopoeia. So American pharmacy is on the march toward world health.

I should not have properly discharged my duty in addressing this distinguished convocation on behalf of the Government services if I failed to commend the pharmaceutical profession for its leadership in establishing and implementing the high standards which characterize American pharmaceutical services today. May the AMERICAN PHARMACEUTICAL ASSOCIATION and its constituent State societies, as well as the other important pharmaceutical professional groups, go forward toward their unchanging goal of maintaining the highest level of service to the public.

Response by Robert P. Fischelis

SECRETARY, AMERICAN PHARMACEUTICAL ASSOCIATION

PHARMACY is an art which draws upon all of the subdivisions of science in some phases of its service to the sick. Both naturally and legally, it is classified as one of the healing arts. For more than a century pharmacists in America have been conscious of the obligations that go with this classification. One hundred years ago the first step was taken to state these obligations and responsibilities formally, and to endeavor to have all members of the profession conform to a minimum standard. This was the beginning of organized pharmacy in America.

Because of the cosmopolitan atmosphere in which the art of pharmacy is practiced, the pharmacist—perhaps more than any of his colleagues in the healing arts—is given daily opportunity for unusual services to his fellow-men. We like to believe that in the vast majority of instances pharmacists meet these opportunities for service to their fellow-men with credit to themselves and to their profession.

(Continued on page 38)

Response

• • • • • • • • • • • • • *from preceding page*

Today, by your presence, and through the words of greeting and felicitation contained in the scrolls and messages with which you have presented us, and through the remarks of your distinguished spokesman, you have encouraged us in this belief.

We appreciate these messages written in many languages, plainly, or engrossed and illuminated by the skilled hands of artists, more than we can express in mere words. They present to us a challenge for our future conduct and endeavors.

It has been my privilege as Secretary of the American Pharmaceutical Association to be in frequent contact with the secretaries and other officers of many of the organizations for which Dr. MacEachern spoke so eloquently.

It has also been my privilege to be in frequent contact with the departments of the government for which Surgeon General Scheele spoke with such understanding and appreciation.

In all of these contacts we have found the scientific, professional, social, economic, and learned societies here represented, and the agencies of the government most gracious and considerate and appreciative of the problems of our profession. We have at times argued with you about the place of the pharmacist in the scheme of things and you have stimulated us to demonstrate that our own conception of where we fit in is correct.

We are heartened by your messages, and we promise you that as we begin our second century of progress you will not find us wanting in appreciation of the work which each of you in your spheres of endeavor are contributing to make this a better world in which to live.

Accept, we ask you, our deep gratitude for your participation in this ceremony, for your encouragement, and for the opportunity you have given us to walk with you into the unknown, to share with you the startling and staggering developments in the sciences and the healing arts, and to work humbly with you as the wonders of the universe continue to unfold through the individual and combined efforts of all of us.

More than twenty-five organizations from all parts of the world sent delegates. These foreign representatives were seated in front row.

By Donald C. Riley†

A Student Detailing Program*

The experience of one pharmaceutical manufacturer shows that not only is the company helped, but the student as well, as a result of summer vacation employment in a well planned detailing program.

A UNIQUE promotional program was introduced by Pfizer during the summer of 1951, employing 70 medical students from 14 medical schools during their summer vacation to call upon physicians and discuss the details of various dosage forms of Terramycin.

The success of this program led to another such program last summer, enlarging it to include not only every medical college in the country, but also a select list of accredited schools in the allied health professions—the pharmacy schools, dental and veterinary colleges. More than 200 students were involved in the student program for the summer of 1952.

Isn't it logical to go directly to the prescribers of a product, and to the people who facilitate distribution and fill the prescriptions? And, certainly, there is no better investment in the future of our country than to invest in our professional youth—the scientific and commercial leaders of tomorrow.

Participating in the student program for the summer of 1952 were 17 pharmacy students who entered the 4th year in the fall in the following

* Presented before the Section on Education and Legislation, A. PH. A. Convention, Philadelphia, Pa., August, 1952.
† Director, Student Medical Program, Chas. Pfizer and Co.

schools and colleges throughout the country:

Fordham University College of Pharmacy
Columbia University College of Pharmacy
Massachusetts College of Pharmacy
Brooklyn College of Pharmacy
University of Maryland College of Pharmacy
Philadelphia College of Pharmacy
Butler University College of Pharmacy
University of Florida College of Pharmacy
Ohio State University College of Pharmacy
University of Texas College of Pharmacy
University of Southern California College of Pharmacy
University of California College of Pharmacy
University of Washington College of Pharmacy
University of Colorado College of Pharmacy
University of Connecticut College of Pharmacy
University of Michigan College of Pharmacy
St. John's College of Pharmacy

The basis of school selection roughly was the choice of the colleges in any particular geographic area which had the largest enrollment. All geographic areas from coast to coast were represented.

Students were selected with the sponsorship and cooperation of the deans and faculties. Interviews then were held with candidates at the schools by Pfizer district managers. Criteria for selection was that the student be considered to be the most deserving, in that he was (and is) making a genuine contribution to his class and school. The student should be mature, and interested in and capable of talking to members of the pharmacy and allied professions. Character was of the utmost importance. The students were completely trustworthy and possessed a high degree of initiative and resourcefulness, with the ability to assume responsibility. They also had shown self-discipline, and were willing to travel.

At company expense, students were brought to New York in June and put through the Pfizer Antibiotics Training Class. This intensive course lasted a full week, with day and evening classes conducted by a select list of 27 medical, technical, commercial and administrative personnel. Special section meetings were provided for different student classifications, with graduate pharmacists handling the special commercial indoctrination of the pharmacy students. The entire field of antibiotics was covered, along with product research and development, and the organization and operation of the pharmaceutical industry, and detailing techniques and procedures.

At the end of the training classes, two of which were held in New York and another in Los Angeles, students were placed in teams comprised of medical, dental and pharmacy students. This provided a complete "blitz unit" to cover all classes of profession and trade. The term "blitz" refers to the field promotional activities characteristic of Pfizer's operations. A team is sent to a city, and in a short period of time, usually one week, sees as many doctors as possible, then moves into another area. Under the leadership of Pfizer personnel specially trained for this purpose as team captains, the teams traveled from city to city under a carefully organized and directed program. The pharmacy students brought the doctors, dentists, and pharmacists in the retail stores, wholesale houses and hospitals the latest information about the developments in the field of antibiotics, with particular reference to the latest dosage forms of Terramycin. Fortified with a commercial visual aid, a medical visual aid, literature and complimentary dosage forms for the physicians and dentists, the pharmacy students did an outstanding job. There was no selling involved, but if a pharmacist wished to place a turnover order, the pharmacy student was prepared to be of service. Adherence to the highest ethical standards keynoted the program.

Valuable Experience

The Pfizer Student Program for the Summer of 1952 was more than just a summer job for the pharmacy student. It gave him an opportunity to work in the atmosphere of his future profession. The program provided unequaled educational opportunities, giving a most valuable insight into professional practices and requirements in various sections of the country. The program was certainly of worth-while assistance in financing the student's way through school, and increasing his knowledge of antibiotics. There is every evidence that those who took part became better students, with the summer's experience helping to develop further the ability to think quickly, express himself clearly, manage his own affairs successfully, and work with others harmoniously.

Pfizer benefits from the good-will and the wide dissemination of information about its products directly with those who prescribe and dispense. Moreover, by investing in the country's professional youth, and contributing to his education, Pfizer assured itself of the availability of well-trained and experienced personnel for future positions with the company.

FCDA Stockpiles Vital Medical Supplies

In mid-December, the Federal Civil Defense Administration allocated the last three million dollars of its original 20 million dollar stockpiling fund for the purchase of medical supplies. In this recent allocation, one million went for the purchase of engineering supplies, and two million for medical items.

The two million to be spent for medical supplies will procure 600,000 bottles of dextrose and sodium chloride injection; 600,000 bottles of dextrose injection for intravenous fluid therapy of the seriously injured who cannot take liquids by mouth; 600,000 intravenous injection sets; 200,000 leg splints; and 398 portable-field operating lamps.

The funds will also pay for transportation of 41,754 medical field kit cases and 200,418 medical field kit litter carrying straps, which are being obtained without cost from the Surgeon General's Office of the Department of the Army.

Civil Defense Increases Blood Plasma Reserves

The Federal Civil Defense Administration will receive an additional reserve of blood plasma through the National Blood Program, at a cost of 15 million dollars, according to current plans. An additional two million has been earmarked by FCDA for collecting and processing more blood if the public donates enough under the program. Currently, donations are running short of initially established goals.

The FCDA stockpile of medical and engineering items, stored in warehouses throughout the country, now amounts to 84½ million dollars, plus the additional two million set aside for eventual processing of more blood into plasma.

Five Medical Service Corps Officers Aboard *Consolation*

Five Medical Service Corps officers are attached to the *U.S.S. Consolation*, hospital ship now stationed in Korean waters. In addition, she carries a staff of 27 physicians, 3 dentists, 26 nurses, and 201 hospital corpsmen. The first hospital ship to reach Korea after outbreak of war, the *Consolation* has handled more than 17,000 patients, with another 21,250 treated as outpatients. The *Consolation* was also the first hospital ship to land helicopters on its flight deck, a year ago. Since that time, 512 landings have been made, bringing aboard 654 patients for medical treatment. However, during nearly five months of that period, she was in the United States for upkeep and replenishment.

The Army did not announce what specific assignments were being handled by the five Medical Service Corps officers aboard.

Red Cross to Help Train Defense Workers

On December 22, the FCDA announced that the American National Red Cross had agreed to

help state and local civil defense directors recruit and train more workers for emergency feeding. Special emphasis will be placed on mass feeding under emergency conditions, and the use of improvised equipment. The FCDA stated that the specially trained people under this program will augment the resources now available in various communities that are normally engaged in quantity feeding operations, such as restaurants, schools, and industrial establishments.

Commerce Department Releases Post-Defense Book

In an effort to insure a stable economy after the present defense goals have been met, the Commerce Department has published a new book, "Markets after the Defense Expansion." It is available for 55¢ from the Commerce Department's Field Offices or the Superintendent of Documents, Government Printing Office, Washington, D. C.

Secretary of Commerce Charles Sawyer, in commenting on the new publication, said, "It is intended to be a practical document covering possibilities in the years immediately ahead, rather than a visionary look over a long range." While largely directed toward the manufacturers' problems of sales and distribution, the book nevertheless has merit for those in the retailing and service fields, since it compares economic trends over the past years as they affected consumer buying habits.

Army Announces Small Increase in High School ROTC Instructor Strength

Army officers assigned to high schools for instruction of ROTC units have been increased to 130, from a low of 100, it was announced recently. Non-commissioned officers have been increased to 315, from 260. This increase permits one officer instructor for each 500 ROTC high school students, and one non-commissioned officer for each 200. Prior to the 1952–53 school year, 275 officers and 685 non-commissioned officers had been assigned to this work. The reduction was made then to insure success of the Army's long range officer procurement program through senior ROTC units in colleges and universities.

Possible New Antidote for Nerve Gas

A German drug, Buscopan (1-N-butyl-scopolammonium bromide) has been termed a better antidote to nerve gases than atropine by Dr. William B. Deichmann of the Albany Medical College. Dr. Deichmann made his statement at the recent meeting of the International College of Surgeons in Chicago.

Buscopan acts at the ganglia, the collections of nerve cells occurring along the chains of sympathetic and parasympathetic nerves. Atropine acts at the nerve endings. The different area at which the two drugs work may account for the better effect of Buscopan, according to Dr. Deichmann. To date he has used the drug in experimental animals, and only as an antidote for the three insecticides, Parathion, dimethyl-Parathion, and Systox, which are similar to nerve gases.

Emergency Medical Care for Diabetics in Case of Disaster

The FCDA recently published a reprint of the article "Emergency Medical Care of Diabetics in Civilian Disaster," initially appearing in the *Journal of the American Medical Association.* The FCDA reprint is a nine-page mimeograph copy, and is available from the Federal Civil Defense Administration, Washington 25, D. C.

Irwin Gawley, of the Northern New Jersey State Rad-Chem, team, demonstrates how to test for radioactivity at Newark Civil Defense course, Rutgers University's College of Pharmacy. The course is currently being given at Rutgers to train pharmacists and allied personnel in civil defense in event of emergency. Left to right: Frank A. O'Neill, director, Newark Civil Defense; Samuel Klein, chief, Atomic Bacteriological Chemical Warfare Unit, Newark Civil Defense; Mr. Gawley; Colonel Jack Eisen, deputy chief, under Mr. Klein; and Dr. Maurice Bender, assistant professor of Biochemistry, Rutgers College of Pharmacy.

FROM THE THE SECRETARY'S DIARY FOR DECEMBER, 1952

1st Breakfast at the Statler Hotel with Harold Hutchison of the Mack Printing Company, discussing publication problems, and later in the day at the Food and Drug Administration with Messrs. Larrick and Goodrich reviewing proposals for making State food, drug and cosmetic acts uniform with the Federal law. Late in the afternoon to New York for a series of meetings.

2nd All day at the meeting of the National Drug Trade Conference and reporting for the Committee on Uniform State Laws to which has now been assigned the problem of dealing constructively with "substitution" and other pending intra-pharmaceutical difficulties. In the evening to the Waldorf-Astoria to see the Remington Honor Medal bestowed upon Pat Costello in the presence of a multitude of pharmacy's elite.

3rd This morning a meeting of the Publication Committee in New York with B. V. Christensen presiding. This was followed by a meeting of the Committee on Public Relations with Bert Mull in the chair. Here the winning Pharmacy Week displays were selected and plans for a major public relations program were discussed.

4th A meeting in New York of the Sub-Committee on the By-Laws for the Scientific Section occupied most of this morning with Rudolph Blythe and Ray Kelley expressing the views of the Section. After lunch a meeting of the Committee on Student Branches with Chairman Tice presiding, and here the entire Student Branch program for 1953, was explored.

5th This morning a visit to the headquarters of the American Social Hygiene Association in New York to confer with the new executive director and members of his staff especially regarding the work of the joint A.PH.A. and A.S.H.A. committee. Now a conference with Dr. Tom Dublin of the National Health Council and in the afternoon to a meeting of the Board of Directors of the Council at which programs of far-reaching importance were under discussion.

7th The week-end occupied in Washington catching up with accumulated mail and today conferences with George Griffenhagen, who is about to take over the curatorship of the Medical and Public Health Section of the National Museum, and with Cyrus Fleck of the Mack Printing Company. In the afternoon traveling to New York with Justin Powers for meetings of the A.P.M.A. and other activities spread throughout the coming week.

9th Yesterday and today inspecting the College of Pharmacy of Rutgers University with Dr. Melvin Green of the American Council on Pharmaceutical Education and in the evening to the annual dinner of the A.P.M.A. at the Waldorf where Surgeon-General Scheele received the Association's highest award for outstanding achievements of the Public Health Service.

12th Yesterday and today inspecting the Brooklyn College of Pharmacy with Dr. Melvin Green for the American Council on Pharmaceutical Education. Now homeward bound and reaching Washington in time to meet with Messrs. Hayman, Dixon and Zeisig of the Board of Canvassers, who had arrived for the task of counting A.PH.A. ballots for the election of officers.

19th All of this week in Washington and glad to be able to attend to office chores and holiday preparations. Cooperating actively with Dr. H. A. B. Dunning and Noel Foss in preparations for the Kelly Memorial dedication and today a meeting in Baltimore with Finance Committee Chairman Dunning to discuss pressing matters in preparation for ASSOCIATION activities in 1953.

24th The early days of the week devoted to routine office activities and today our annual Christmas luncheon for the entire ASSOCIATION staff and now for a long Christmas week-end with the office closed until December 29 for all but routine activities on the 26th, since most staff members worked on Armistice Day in order to be free on the day after Christmas.

31st Now comes the end of 1952. In many ways perhaps the most outstanding year in the ASSOCIATION's history because it marked the hundredth anniversary of its founding and received the greetings and appreciation of hundreds of organizations and individuals scattered throughout the world. One cannot live through such a year without feeling deeply grateful to the founding fathers and to the many living and dead whose devotion to our professional ideals and service to the sick has created a public esteen for pharmacy which is priceless.

An announcement of twofold interest to pharmacists . . .

Methium is now Council accepted

Of professional interest

The Council on Pharmacy and Chemistry has announced acceptance of Methium, the new Chilcott specialty for use in hypertension to

1. lower blood pressure
2. provide symptomatic relief.

Of commercial interest

In addition to his professional interest and service, the pharmacist runs a business, and from this perspective Council acceptance means greater sales acceptance:

- New doctors will be prescribing Methium
- Current users will continue (or increase) their use of Methium

Methium sales are going up. With Council acceptance, prescribing will be stepped up even more. Be sure you have an adequate supply on hand.

Check both tablet sizes

Tablets		List price, each	Fair trade minimum
125 mg.	100's	$ 2.00	$ 3.00
	500's	8.00	12.00
250 mg.	100's	$ 3.00	$ 4.50
	500's	12.00	18.00

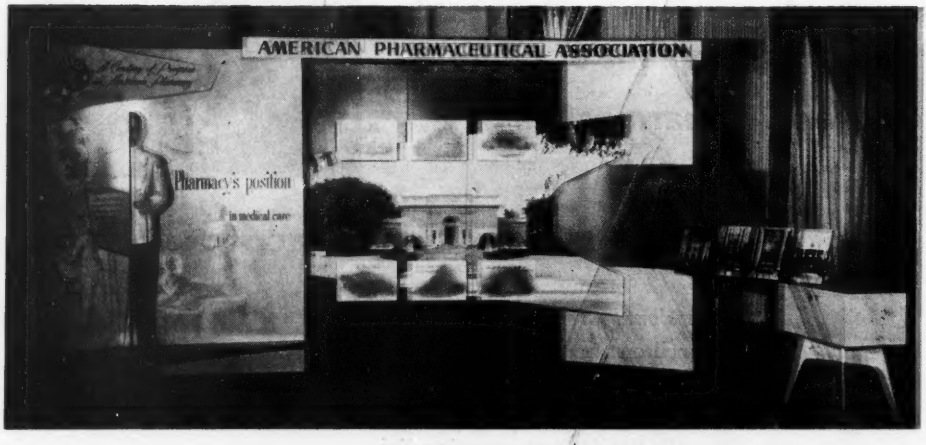
Methium® CHLORIDE

(BRAND OF HEXAMETHONIUM CHLORIDE)

WARNER-CHILCOTT

Laboratories, NEW YORK

A. PH. A. Professional Exhibit Shown at National Meetings



COMMEMORATING "A Century of Progress in American Pharmacy," the AMERICAN PHARMACEUTICAL ASSOCIATION sponsored an exhibit at the 1952 national meetings of the public health organizations. Shown first at our own Centennial Meeting in Philadelphia, August 17–22, the exhibit attracted much attention. Among the groups seeing it during the year were those attending the American Dental Association meeting in St. Louis, September 8–11; the American Hospital Association meeting in Philadelphia, September 15–18; the American Public Health Association in Cleveland, October 20–24; and the Clinical Session of the American Medical Association meeting in Denver, December 2–5. Physicians attending the A. M. A. meeting received a letter of greeting from the A. PH. A., along with a reprint of the Code of Ethics. In the greeting, it was strongly suggested that they refer especially to the section on "The Pharmacist in His Relations to the Other Health Professions."

Later this month the exhibit will be sent to the annual meeting of the American Association for the Advancement of Science in St. Louis, at which representatives from all fields of scientific endeavor will be present.

Another exhibit sponsored by the A. PH. A. during the current year which has been shown at various hospital meetings, depicts the activities of the Division of Hospital Pharmacy which observed its Tenth Anniversary during 1952.

As shown in the illustration, the theme carried out is "Pharmacy's Position in Medical Care," showing the role of the pharmacist in relation to the physician, the nurse, the dentist, and other members of the public health team. On this illuminated panel, the focal point is the pharmacist along with the following statement: "Local communities depend upon their pharmacists for guidance to correct sources of health information."

The ASSOCIATION'S headquarters centers the middle panel and is surrounded by drawings of the Capitol Building, the Smithsonian Institution, the Lincoln Memorial, the White House, the National Naval Medical Center, and the National Institutes of Health in Bethesda, Md. Also shown are photographs of the interior of the Headquarters Building with emphasis on the various services offered by the ASSOCIATION over the past century. The photographs and drawing not only show the beauty of the building and its surroundings but further illustrate the relationship of the A. PH. A. to the various government agencies as well as the facilities available for providing services to the pharmacists of the country.

The package frames your prescription—
Give it prestige with a Duraglas container

Duraglas Rx Containers

Look smart and professional
Are moisture-tight
Are sturdy
Are made of inactive material
Show contents
Come in all needed sizes
Are low in cost

OWENS-ILLINOIS GLASS COMPANY
Toledo 1, Ohio • Branches in principal cities

American College of Apothecaries Plans Eastern Meeting in New York, January 26

PROBLEMS of prescription pharmacy, inter- and intra-professional relations, and the marketing of pharmaceuticals will all be discussed at the two-day Eastern meeting of the American College of Apothecaries in New York, January 26 and 27. Meetings will be held in the Essex House, Central Park South. Advance reservations should be sent to Robert E. Abrams, A. C. A. Secretary, 2173 Knorr Street, Philadelphia, Pa.

The sessions will open on Monday morning, January 26, with Dr. Frederick Lascoff of New York presiding. Following an address of welcome by Dr. Lascoff, Louis B. Longaker, president-elect of the A. C. A., will bring greetings to those present. These opening exercises will be followed by a panel discussion "Toward Better Understanding," and will feature comments by Calvin Berger, New York, of the A. C. A., Charles D. Doerr, vice-president, McKesson & Robbins, and Robert A. Hardt, vice-president Hoffmann-LaRoche. Mr. Abrams will present a summation of the discussion following the remarks of the panel members. At noon the meeting will adjourn for lunch.

The Monday afternoon session will be devoted entirely to a "Prescription Clinic," divided into two parts. The first, on ophthalmology, will be discussed by Dr. Francis P. Guida, Assistant Clinical Professor of Ophthalmology of Yale University, and Dr. Nicholas Fenney of the School of Pharmacy, University of Connecticut. The second part of the clinic will be devoted to dermatology, with Dr. Marion Sulzberger of the Society of Investigative Dermatology, and Dr. Martin Barr of the Philadelphia College of Pharmacy and Science leading the discussion. John Dugan, a fellow of the American College of Apothecaries from New Haven, Conn., will preside at this second session.

The banquet will be held in the evening, at the Essex House, with Dr. E. Emerson Leuallen, dean of the Columbia University College of Pharmacy, acting as toastmaster.

Mrs. Jennie Libros, F. A. C. A., Philadelphia, will preside at the Third Session on Monday evening, following the banquet. This will take the form of a round-table discussion of operational problems for the prescription pharmacist, and all members of the A. C. A. are invited to enter the discussion.

Tuesday morning's session will be devoted to trends in pharmaceuticals. Dr. Arthur DeGraff, chairman of the Committee on Scope of the U. S. Pharmacopeia, will speak on "Newer Trends in Therapeutics"; Edward Carroll, director, Economic Research, Sharp & Dohme, on "The Expanding Markets for Ethical Pharmaceuticals," and S. M. Fossel, assistant manager, Sandoz Pharmaceuticals, on "The Chaos in the Distribution of Parenterals." At noon the meeting will recess for lunch.

Current public and professional problems will share the spotlight during the closing session Tuesday afternoon. Mark Cundiff, Parke, Davis & Co., will present "Public and Professional Relations," and following his remarks, Calvin Berger and Alexander Yalan, Brooklyn, will add additional comments. The problem of "Generic Names" will be outlined by Dr. R. T. Stormont, secretary of the Council on Pharmacy and Chemistry of the American Medical Association, and the session will close with a four-party discussion of "Substitution." It will be examined from the standpoint of ethics, as well as economics, by Carl Raiser of Smith, Kline & French Laboratories; Wilbur Powers, secretary, New Jersey State Board of Pharmacy; Leslie C. Jayne, secretary, New York State Board of Pharmacy; and Robert Gerstner of New York City, a fellow of the American College of Apothecaries.

Registration fee for the meeting, including the banquet, is $15.00; without banquet, $5.

SULFA*CETAMIDE*

SULFADIAZINE

SULFAMERAZINE

the "extra advantage" in this triple sulfonamide is sulfacetamide

TRICOMBISUL® (acet-dia-mer-sulfonamides-Schering) provides not only sulfadiazine and sulfamerazine — standard components of almost all triple sulfonamide mixtures — but also sulfa*cetamide*.

Sulfacetamide brings to the combination extremely high solubility, high bacteriostatic activity, and greater safety for the urinary tract.

TRICOMBISUL

Schering CORPORATION • BLOOMFIELD, N. J.

TRICOMBISUL

SCHERING

Employment Attitudes

• • • • • • • • • • • • • *from page 23*

only two out of the seventy-nine inquiries from the independent drug store operators, indicated the number of hours that would be necessary to earn the salary offered; these two were forty-eight and forty-two hours per week at a salary of $400 per month.

From 1947 through 1950, "the choice of the opportunities available" given by the pharmacy graduate has been primarily in retail pharmacy, professional pharmacy, hospital pharmacy, and in detailing, with a very few indicating a choice among the many other fields open for selection. The 1951 class began to show some interest in other fields, but the 1952 graduate has shown the greatest interest in the more varied opportunities now available to him.

Of the sixty-three members of the June 1952 graduating class, fifty-three participated in the survey. There were as many as five choices by some students from the various opportunities in the field of pharmacy, but the final tabulation revealed that retail pharmacy was the leader with some fifty-one naming it either first or close to first choice.

The broader selection of opportunities by the 1952 pharmacy graduate adds the fields of manufacturing, wholesaling, teaching, and others to the list. Retail pharmacy is losing to the special fields each year. The main new interest, as a result of the survey, is shown in hospital pharmacy, particularly in the Veterans Administration. The basis for this increased interest was better working conditions, hours, and retirement benefits which overshadow the salary inducements offered by the independent drug store operators.

The 1952 graduate, like the one in 1951, will be satisfied to work from a 48 to 54-hour week, but there is a difference in the attitude toward salary. A comparison between the 1952, 1951, and 1950 graduate-requests breaks down the salaries into four major divisions, namely; $300–325; $325–350; $350–400; $400–500. Heretofore, the percentages in these groups have remained rather constant, but with the 1952 survey, there has been a shift to the bargaining position by the graduate in face of the many opportunities. This is indicated by an increase from 9% to 36% selecting the $400–500 bracket and 45% of the group that were undecided.

Of the fifty-three graduates who participated in this 1952 survey, forty-eight were men and five women; twenty-two were married, thirty-one single, and forty of the group were under the age of twenty-five—a decided change from 1948 when the class consisted of a considerable number who were more mature, since their opportunity for college education was postponed because of the service they gave to their country during World War II. There might be some correlation between the age-difference and the indecision of the 1952 graduate compared to the 1950 or the 1948. The earlier graduate was anxious to become settled, less apt to start out into a new untried field, whereas the younger graduate, with less responsibilities, is willing to experiment with the opportunities available and make a break from the time-worn path into retail pharmacy.

As a further study, an effort was made to determine how permanent the graduate is as an employment risk. The classes of 1948 through 1951 were checked and this revealed that most of the graduates will make at least one change in employment within the first year. This may be due to several possibilities. Among those noted in the survey were: personality conflicts between employer and employee; a difference in the stand taken on ethics; lack of forethought by both employer and employee in the original employment contract which resulted in a misunderstanding.

One reason for change of employment which showed up repeatedly in the survey, was that the graduate changed positions because he was the only registered pharmacist employed in the drug store and that it was his desire, as a beginner, to work with men who had good training, had become established, and were ready to help him gain the experience he desired.

A second rather frequent reason given was that there was a desire for a more over-all professional atmosphere, where less emphasis was placed on the general merchandising phase of the business and where there would be more opportunities to contact the medical profession and work in the professional phase of pharmacy.

Conclusions

The trend in the employment attitude of our present graduating pharmacy seniors is to select their first position with more forethought and consideration. The so-called "$100-per-week" is no longer the prime consideration. The graduate is anxious to enter a field of employment where he can become a member of the allied health team in his community; can protect the public health of its citizens, and be looked up to as a valued member of that community, primarily because he is bringing to it some of the knowledge of the newer advancements in the scientific world.

A topic of staff room discussion

Aminodrox

increases usefulness of oral aminophylline

send for detailed literature and sample

In the form of AMINODROX, three out of four patients can be given therapeutically effective *oral* doses of aminophylline.

This is possible with AMINODROX because gastric disturbance is avoided.

Now congestive heart failure, bronchial and cardiac asthma, status asthmaticus and paroxysmal dyspnea can be treated successfully with *oral* aminophylline in the form of AMINODROX.

Aminodrox Tablets contain 1½ gr. aminophylline with 2 gr. activated aluminum hydroxide.

Aminodrox-Forte Tablets contain 3 gr. aminophylline with .4 gr. activated aluminum hydroxide.

Also available with ¼ gr. phenobarbital.

S.E. Massengill

BRISTOL, TENNESSEE

Glycerinated Gelatin

• • • • • • • • • • • • • *from page 25*

Suppositories prepared by the formula given were tested for solution time by placing one in a test tube, barely covering it with distilled water, and then maintaining it in a constant temperature bath at 37° C. until it completely dissolves. The time required was from $1^1/_2$ to 2 hours. It was found that heating the mixture a somewhat longer time than necessary in making the suppositories resulted in a reduction in the time required for them to dissolve when tested by the method described.

Stability Studies

Since suppositories are often stored under varying degrees of relative humidity, experiments were performed to determine the behavior of suppositories made by the given formula when stored at different relative humidities maintained at a constant level. Desiccator jars were prepared, each containing a glycerin/water mixture in the base so as to establish a known relative humidity in the jar. Suppositories were placed on the tray in each jar and the change in weight with time plotted on graphs. The results are shown in Fig.

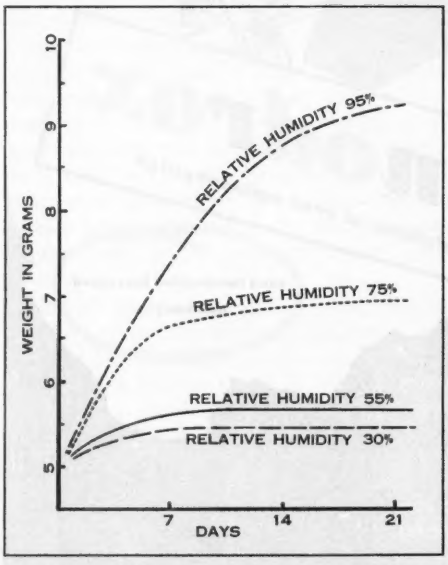


Figure 1. Change in weight of glycerinated gelatin suppositories stored at different humidity levels.

1. From these, it will be seen that some gain in weight occurs by absorption of water at all humidity levels from 30 per cent upwards. As would be expected, higher humidity levels cause a much greater absorption of water. Suppositories stored under these conditions were quite satisfactory with the exception of those stored at 95 per cent relative humidity. These, after 3 weeks, had almost doubled their weight and, at the end of 4 weeks, they gave evidence of mold growth on the surface.

The authors feel that the formula given produces suppositories which are sufficiently stable under most conditions of storage. Hermetically sealed containers would be necessary under extreme conditions of humidity for long periods. It is interesting to note that suppositories stored in ordinary prescription boxes in our laboratory for several weeks lost slightly in weight; it is apparent that the humidity in this environment must have been rather low during most of the storage period.

Effect of Base on Bactericidal Efficiency

It is a well-established fact that in dermatologic preparations the base often has a profound influence on the bactericidal efficiency of the antiseptic incorporated with it. The authors investigated the effect of the base employed in suppositories on the efficiency of various antiseptics. The method used was as follows: suppositories were made using three different bases—theobroma oil, polyethylene glycols (Carbowax base), and glycerinated gelatin. The Carbowax base was made by fusion, using 2 parts of polyethylene glycol 6000 and 1 part of polyethylene glycol 1500. Each suppository contained an antiseptic in a concentration that might be expected to be effective. These suppositories then were tested for bactericidal efficiency. Ten cc. of a standard F. D. A. culture (*S. aureus* 209 or *Salmonella typhosa* Hopkins) were added to 240 cc. of sterile nutrient broth. After mixing, 10 cc. of this were placed in seeding tubes. The suppository containing the antiseptic was then added and the tubes immersed in a constant temperature bath at 37° C. At regular intervals, a loopful of the tube contents was removed and placed in tubes containing 10 cc. of sterile broth. These tubes were then incubated for 48 hours and examined for growth. The results are shown in Tables I–III.

The influence of the base is immediately apparent; particularly, in the case of antiseptics which are more soluble in oil than water. Thus, for example, using both *p*-chlorometaxylenol 1:1000 and hexylresorcinol 1:1000, suppositories

(*Continued on page 52*)

Penicillin for small fry

. . . without the needle!

PENALEV® Soluble Tablets Crystalline Potassium Penicillin G are especially designed for infants and children—to make it easy to give penicillin by mouth and to eliminate the need for injections.

PENALEV Tablets dissolve rapidly in infant formulas, milk, fruit juice or water.

PENALEV Tablets are being intensively promoted by personal detailing, supported by heavy direct mail and medical journal advertising campaigns.

Stock adequate supplies of each potency of PENALEV Tablets so you can fill all prescriptions for this important item promptly.

Unusually stable, PENALEV Tablets will retain their potency for a period as long as three years without refrigeration. Supplied in three potencies: 50,000 units, 100,000 units, and 250,000 units, vials of 12, bottles of 100.
Sharp & Dohme, Philadelphia 1, Pa.

SHARP & DOHME

Penalev®

Soluble Tablets Crystalline Potassium Penicillin G

Glycerinated Gelatin

• • • • • • • • • • • • • • *from page 50*

made with either theobroma oil or a Carbowax base were not effective against *S. aureus* while suppositories made with glycerinated gelatin killed all organisms in 30 or 60 minutes. The results using *S. typhosa* as the test organism were quite similar. Neither of the two oil-soluble antiseptics provided an antiseptic suppository except when used in a glycerinated gelatin base.

Such a result using theobroma oil might be predicted since the high solubility of the antiseptics in oil would permit little to enter the water phase where it could affect the organisms. The reason for the negative result with the Carbowax base is not readily understood since this base is water-soluble.

In the case of water-soluble antiseptics, different results were obtained. Using nitromersol as the antiseptic, a suppository made with theobroma oil killed the organisms present within 5 minutes. Using glycerinated gelatin, 45 minutes were required and, using a Carbowax base, the results were erratic. When Phemerol was used as the antiseptic, a suppository made with either glycerinated gelatin or a Carbowax base killed all organisms within 5 minutes while, in theobroma oil, 45 minutes were required.

Combining all results, it seems likely that glycerinated gelatin is the best and most reliable vehicle to use for introducing antiseptics into body cavities in suppository form. It is quite reasonable to suppose that the same might be true when introducing other drugs by way of a suppository for either a local or a systemic action, but this has not as yet been proved by experiment. One of the difficulties with a theobroma oil suppository is that, when it is inserted, it promptly melts. Quite frequently, leakage occurs, carrying with it the medicament. In addition to this, oil-soluble drugs are not readily released from the base. In contrast, suppositories made with glycerinated gelatin slowly dissolve in the secretions and provide a slow continuous release of the medication.

Summary and Conclusions

1. A rapid, simple method for making glycerinated gelatin suppositories is presented.

2. The need for selecting either a cationic or an anionic gelatin to avoid certain incompatibilities is discussed.

3. Suppositories made by the method given have been tested for solution time and stability at various degrees of relative humidity; the results are presented.

4. Experiments are described illustrating the effect of the base employed on the bactericidal efficiency of various oil-soluble and water-soluble antiseptics prepared in suppository form.

Acknowledgment

The authors wish to thank Dr. Bernard Witlin of the Department of Bacteriology for his assistance in conducting the bactericidal efficiency tests reported in this paper.

REFERENCES

(1) "The United States Pharmacopeia," Fourteenth Revision, Mack Printing Co., p. 257.
(2) *J. Am. Pharm. Assoc., Pract. Ed.*, **11**, 565 (1950).
(3) "The United States Pharmacopeia," Fourteenth Revision, Mack Printing Co., p. 764.
(4) *Am. Prof. Pharm.*, **18**, 327 (1952).

Cortisone in Allergic Disorders

In a paper read before the New York Academy of Medicine's December 18 meeting, held at the New York Academy of Medicine, Dr. Herbert R. Morgan of the University of Rochester School of Medicine and Dentistry reported his findings in a study of the action of cortisone. Completed in conjunction with medical student, Robert H. Leahy, the Morgan study showed that cortisone acts directly on allergic or hypersensitive cells to protect them from the substance that would poison the cells because of their oversensitivity. The study was made with cells growing in tissue culture outside the animal body. The cells were from guinea pigs hypersensitive to tuberculin. Individual cells from the animals were subjected to tuberculin, and those that had first been treated with cortisone did not die, untreated cells did.

Five Million Lives Saved by DDT

Five million deaths and a hundred million serious illnesses have been prevented by DDT since it came into common use ten years ago, according to Dr. Edward F. Knipling, president of the American Association of Economic Entomologists. Speaking at the 64th Annual Meeting of the American Association of Economic Entomologists in Philadelphia on December 15, 1952, Dr. Knipling said greatest strides were made with DDT in malaria and typhus control, but the incidence of dysentery and typhoid have also been reduced by the use of DDT. Deaths due to DDT, on the other hand, have been negligible, since the cases of intentional or accidental poisoning with the insecticide are far less than those reported for aspirin and common household chemicals.

As a pharmacist you will be interested to know that Nio-A-lets (formerly Nion Vitamin A Acetate) are being introduced to the Medical profession by journal announcements and direct mail sampling!!!

NIO·A·LET

The VITAMIN-A with the high B. A.* degree!

68% greater

***BIOLOGICAL AVAILABILITY** (1)

due to better absorption from the G.I. tract makes NIO-A-LET the valedictorian of the Vitamin A class.

NIO-A-LETS are

★ small sugar-coated tablets
★ entirely free of fishy odor and taste
★ without sensitivity reactions

Available in 25,000 USP unit sugar-coated tablets
Bottles of 100 and 500
Literature on request

(1) Compared with USP Reference Standard

NION

1001 NO. McCADDEN PLACE
LOS ANGELES 38, CALIFORNIA

NION CORPORATION

Water-Soluble Suppository Base

• • • • • • • • • • • • • • *from page 27*

Irritation Studies

Irritation studies were conducted by a physician in a hospital. Water-soluble suppositories were inserted into the rectum of eight selected patients for periods ranging from one to fifteen consecutive nights. There was no irritation in any case. It was found that when glycerin or propylene glycol were used to soften the suppositories a burning sensation was produced when the suppository was inserted into the rectum.

Absorption from the Water-Soluble Base

To determine if a drug would be absorbed from the water-soluble suppository base it was decided that pentobarbital sodium, seconal sodium, and amytal sodium would be incorporated into the water-soluble base, using suppositories of cocoa butter with the same drugs as a standard. The test animal was the albino rat.

The absorption was judged by the onset of action which was recorded by the loss of righting reflex of the animal. The duration of action was taken at the time when the animal regained its righting reflex.

It is interesting to note that, with the drugs used, the onset of action was consistently more rapid from the cocoa butter suppositories than from the water-soluble ones, but the duration of action was consistently longer from the water-soluble suppositories than from the cocoa butter ones. Further pharmacological testing may indicate a specificity of type of action for certain drugs in these bases.

Compatibilities

The following drugs have been compounded with the water-soluble bases and are compatible: pentobarbital sodium, seconal sodium, amytal sodium, ethylaminobenzoate, aminophylline, chloral hydrate, tannic acid, quinine sulfate, sulfathiazole, camphor, resorcinol, chlorobutanol, thymol iodide, chlorophyll, mercurochrome, and gentian violet.

The suppositories made using these bases are not intended to be used as substitutes for any patented preparations, and should not be compared with any products on the market as the suppositories reported here base their claims entirely on being dissolved in the body fluids when inserted into the rectum or vagina, while other preparations are based upon the melting of the suppository after insertion. .

Summary and Conclusions

1. Three water-soluble suppository bases have been formulated. These bases differ primarily in water content and hardness.

2. Suppositories made using water-soluble bases offer the following advantages over those made with cocoa butter:

(a) The medicament is either dissolved in the base or with insoluble drugs the viscosity of the base is great enough so that a drug may be evenly distributed in the base.

(b) The suppositories do not tend to stick to the mold and may be readily removed after hardening.

(c) The suppositories may be handled without melting.

(d) The suppositories do not require refrigeration and are quite stable.

• 3. Animal experiments have established the absorption of barbiturates from the water-soluble base.

4. Formulation with different drugs has shown the compatibility of these bases.

5. Limited clinical trials indicated these bases to be non-irritating.

BIBLIOGRAPHY

(1) Husa, W. J., "Pharmaceutical Dispensing," Ed. 2, 1941, pp. 153–172.
(2) Lesser, M. A., *Drug Cosmetic Ind.*, **54:** 403–4, 460–1, 480 (1944).
(3) Bird, John C., *J. Am. Pharm. Assoc.*, **26:** 475–9 (1937).
(4) Breinlick, J., *J. Deut. Apoth.-Ztg.*, **55:** 397 (1940).
(5) Freudweiler, R., *Schweiz. Apoth.-Ztg.*, **79:** 149–52 (1941).
(6) Middendorf, L., *Munch. med. Wochschr.*, **86:** 95–6 (1939).
(7) Gillham, R. W., and Tomlinson, J. E., *Pharm. J.*, **162:** 472 (1949).
(8) Cheymoul, Buffet, and Lechat, *Ann. pharm. franc.*, **5:** 59–63 (1947).
(9) Shaffer, C. B., and Critchfield, F. H., *J. Am. Pharm. Assoc. Sci. Ed.*, **36:** 152–7 (1947).
(10) Smyth, H. F., Carpenter, C. P., and Shaffer, C. B., *J. Am. Pharm. Assoc. Sci. Ed.*, **39:** 344 (1950).
(11) McClelland, C. P., and Bateman, R. L., *J. Am. Pharm. Assoc. Pract. Pharm. Ed.*, **10:** 30–33 (1949).

vi-syneral vitamin drops

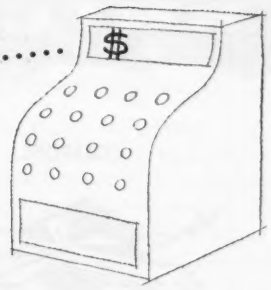
first and **original**

aqueous solution of
fat-soluble plus
water-soluble vitamins.

(U. S. Patent No. 2,417,299.)

u. s. vitamin corporation
casimir funk laboratories, inc. (affiliate)
new york 17, n. y.

RING UP A WINNER.....



A UNIQUE NASAL SPRAY

BIOMYDRIN*

BE SURE TO CARRY THIS FAST-MOVING NEW PRESCRIPTION PRODUCT!

BIOMYDRIN is an unbeatable combination of therapeutic agents for the treatment of rhinitis and sinusitis.

BIOMYDRIN contains:
- **Neomycin**
- **Gramicidin**
- **Thonzylamine Hydrochloride**
- **Phenylephrine Hydrochloride**
- **Thonzonium Bromide**

BIOMYDRIN is being promoted by a hard-hitting campaign including: Not one – not two – but three sample mailings to physicians in your neighborhood during the next six weeks.

BIOMYDRIN is supplied in a ½ fluid ounce size, specially designed, attractive, plastic atomizer that will deliver a fine mist spray.

BIOMYDRIN is a sure source of profits soon coming your way!

new as tomorrow

BIOMYDRIN is a prescription item, available to physicians only through pharmacies.

*Trademark of Nepera Chemical Co., Inc.

NEPERA

Nepera Chemical Co., Inc.

Pharmaceutical Manufacturers, Nepera Park, Yonkers 2, N. Y.

BRIEFLY NOTED

COLLEGES

On Friday afternoon, December 12, 1952, the Mu Chi Phi Sorority of the **Massachusetts College of Pharmacy** held a Christmas Party for the children of the Albany Street Settlement House, Boston, Mass. As usual this affair was attended by Santa Claus, and each child received many presents from the members of the Sorority.

Sigma Chapter of Kappa Epsilon served as hostesses at an Open House in the College of Pharmacy at the **University of Arizona** on December 19, 1952. A feature of the function was the donation of Christmas presents to be given to an orphanage.

Dr. Lamar B. Dale, chaperone, and Ben Eich, representative of Parke, Davis & Co., recently accompanied 45 pharmacy students from **Howard College** (Ala.) to Parke-Davis' laboratories in Detroit, Mich., for a week's visit.

At the pre-Christmas student assembly at the **Philadelphia College of Pharmacy and Science,** 15 scholarship winners were announced. Two scholarships were in the graduate school and 13 in the undergraduate classes. Of the two graduate school scholarships, the Borden Award went to Arthur B. H. Lee of Honolulu, and the Strong Cobb Award, to William R. Ross of Philadelphia. Two scholarships sponsored jointly by the American Foundation for Pharmaceutical Education and the College were awarded to Raymond J. Schiffman of Philadelphia, and Robert Pennente of Ventnor, N. J.

Dr. Ernest Guenther, vice-president and technical director of Fritzsche Brothers, Inc., was guest speaker for the third annual Edward Kremers Memorial Lecture sponsored by the Rho Chi Society of the **University of Wisconsin** School of Pharmacy and presented at the Madison, Wisconsin School on the evening of December 4. His talk on the latest scientific and economic developments in the field of volatile oils was accompanied by colored still pictures taken by the lecturer during his trip of the past six months, when he visited North Africa and six European essential oil producing countries.

The Alumni Association of the **Brooklyn College of Pharmacy** will sponsor a Testimonial Dinner in honor of Edward Neimeth, chairman of the Board of Trustees of the College, in November, 1953. The honor to be bestowed on Mr. Neimeth is in recognition of his unselfish work in behalf of pharmacy and its allied professions for more than 30 years. He is a member of The Kings County Pharmaceutical Society, AMERICAN PHARMACEUTICAL ASSOCIATION, and Kiwanis.

The library at the **University of Texas** College of Pharmacy has been approved as an institutional member of the Medical Library Association.

The School of Pharmacy of the **University of Pittsburgh,** as part of the celebration of its diamond jubilee, held the first of a series of seminar-workshops on November 19, 1952. This series, open to all pharmacists from the Tri-State area served by the University, began with a consideration of the newer type ointment bases.

The discussions in the seminar portion of the program were held to a consideration of practical aspects of the problem in relation to retail pharmacy. The workshop portion, conducted on a highly individual, extremely informal level, provided adequate time and instruction for every member participating in the program.

Sufficient interest was evidenced to warrant the re-scheduling of this same workshop in January and again at a later date.

William J. Kelleher and Ara J. Paul of the **University of Connecticut** School of Pharmacy

are the recipients of two Eli Lilly research fellowships. Mr. Kelleher was the 1951 winner of the Kilmer Award, presented by the AMERICAN PHARMACEUTICAL ASSOCIATION to a senior student in the United States for meritorious research in pharmacognosy.

On December 5, 1952, pharmacists of the State of Connecticut joined the senior students in pharmacy at the **University of Connecticut** to listen to a talk on the U. S. Public Health Service by George F. Archambault, pharmacist director chief, Pharmacy Branch, Division of Hospitals of the Federal Security Agency.

ASSOCIATIONS

Dr. Paul L. Day of the University of Arkansas, whose pioneering research led to the discovery of vitamin M, one of the "blood-making" vitamins used in the treatment of anemia, has won the 1952 Southwest Award of the **American Chemical Society.**

Dr. Justus B. Rice, director of medical research, Winthrop-Stearns, Inc., has been elected president of the **Association of Medical Directors,** a group comprising heads of the medical departments of approximately 40 U. S. pharmaceutical manufacturers. Dr. Elmer Severinghaus, medical director of Hoffmann-La Roche, was named vice-president, while Dr. Norman Heminway of the Schering Corp. was re-elected to the post of secretary-treasurer.

Appointments for 1953 made by the **Association of Consulting Chemists and Chemical Engineers, Inc.,** were Robert T. Baldwin, exec. secretary and asst. treasurer, and A. B. Bowers, director of publicity and asst. exec. secretary.

Open meetings of the Association of Consulting Chemists and Chemical Engineers, Inc., for 1953 are scheduled as follows: April 21, 1953, Hotel Belmont Plaza, New York City—symposium and dinner; October 27, 1953, Hotel Belmont Plaza, New York City—25th Anniversary—annual meeting—celebration, entertainment, and dinner.

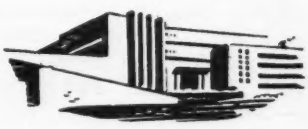
The new officers of the **Southern California Pharmaceutical Association** are: Harold Jewell of Monrovia, president; Donald Owens of Los Angeles, 1st vice-president; Nat Lippman of Huntington Park, 2nd vice-president; and Lloyd Adams of Brawley, treasurer.

The American Heart Association and its affiliates have published a booklet entitled "Heart Disease in Children." The booklet is intended to give an up-to-date summary of the information now available on the prevention and treatment of rheumatic fever, the treatment of rheumatic heart disease, and the correction of congenital heart defects.

Conrad Van Hyning has been appointed executive director of the **American Social Hygiene Association.** In his new post he succeeds Dr. Walter Clarke, who retired last June after almost 40 years with the Association.

During the month of December each of the nation's Governors received an invitation to name a 75-year-old doctor to attend the first western hemisphere conference of the **World Medical Association** as a guest of honor. It will be held at Richmond, Va., April 23 to 25, 1953.

MANUFACTURERS



Walter B. Smith, executive vice-president and general manager of Union Pharmaceutical Division of **Schering Corporation,** died on December 20 at his home, 32 Hamilton Place, Garden City, Long Island.

John F. Kiley, vice-president in charge of general line sales, **Johnson & Johnson,** New Brunswick, N. J., died December 4 at his home in Plainfield, N. J.

Smith, Kline & French Laboratories' Art Department carried off two Gold Medal awards and three Blue Seal awards at the 18th annual exhibition of the Art Directors Club of Philadelphia during December.

(Continued on next page)

Briefly Noted

• • • • • • • • • • • • • *from page 57*

Davis & Geck, Inc., manufacturers of sutures and surgical specialties, recently released the 21st edition of its Surgical Film Library Catalog for distribution. The films are loaned without charge.

Two new research grants totaling $3,000 were announced recently by Dr. William P. Boger, medical director of **Sharp & Dohme, Inc.** One grant of $1,200 was awarded for a period of one year to Tulane University, New Orleans, La., for clinical investigation of "Dirnate," "Benemid," and pancreatic dornase by Dr. C. G. Collins. The other grant of $1,800 was awarded to The Cedars of Lebanon Hospital, Los Angeles, Calif.

Personnel Changes—

Heyden Chemical Corporation—Dr. Dale Scholz has been appointed medical director of Heyden Chemical Corporation. **Eli Lilly and Company**—The appointment of Truman D. Hoover as director of Eli Lilly and Company's new Tippecanoe Laboratories, near Lafayette, Ind., was announced recently. Mr. Hoover will also continue in his present capacity as director of Lilly's glandular products manufacturing division in Indianapolis. **Davis & Geck, Inc.**—Benjamin F. Hirsch has retired from his post as executive vice-president and director of Davis & Geck, Inc. Charles P. Collins, vice-president and general manager, will succeed Mr. Hirsch. **Parke, Davis & Company**—William G. Meier has been promoted to assistant director of engineering and will be responsible for all engineering and maintenance connected with U. S. and Canadian operations. Edwin F. Lau was promoted to superintendent of the antibiotics division. **Schering Corporation**—Chester A. Jarecki of Chicago, Ill., has been appointed district supervisor of the West Central District of the Central Division for Schering Corporation. **Merck & Co.**—Blythe M. Reynolds has been appointed to the newly created post of vice-president for operations, effective January 2, 1953. **Beckman Instruments, Inc.**—John F. Bishop has been appointed assistant general manager of the Instrument Division of Beckman Instruments, Inc. **Raymer Pharmacal Company**—Dr. Edward S. McCabe has been appointed medical director of the Raymer Pharmacal Company. **Pitman-Moore Company**—Dr. Samuel R. Bozeman was recently named director of the Zionsville biologic laboratories. Dr. W. S. Goehenour, whose place Dr. Bozeman is filling, was director of the laboratories for fourteen years. He has been promoted to vice-president of the company and will be located in the Indianapolis office. **George A. Breon & Company**—Frederick G. Madsen has been appointed advertising manager. **Lederle Laboratories**—The following position changes have been announced in the field organization: K. R. Von Fritzinger has been promoted to regional manager of the Northeastern Region, with headquarters in Boston. He replaces H. W. McNey, who moved to the New York office as sales promotion manager. C. R. Kennedy has been named Northwestern regional manager, with headquarters in Chicago. **Ernst Bischoff Company, Inc.**—The appointment of Richard F. Nugent as vice-president has just been announced. Mr. Nugent will be in general charge of promotion, sales, and advertising. **Owens-Illinois Glass Co.**—Six major changes among top executives were recently announced: Smith L. Rairdon has been named vice-president and director of marketing, a newly created position in which he will coordinate all of the company's marketing activities; Sidney F. Davis will succeed Rairdon as division general sales manager; C. G. Bensinger, will be general manager of the Glass Container Division; Henry S. Wade has been appointed vice-president and general manager of the Pacific Coast Division, in charge of all the company's West Coast operations; George S. Babcok, manager of the Closure and Plastics Division, was elected a vice-president of the company; and Hugh C. Laughlin, vice-president and general manager of the Aministrative Division, was elected executive vice-president and member of the board of directors. **The Harrower Laboratory, Inc.**—Russell H. Babb was recently appointed director of advertising and sales promotion. **Smith, Kline & French Laboratories**—Dr. Martin C. Sampson, Instructor of Medicine at the University of Pennsylvania School of Medicine and member of the Endocrine Section of the University of Pennsylvania Hospital, has joined the medical staff. **The Upjohn Company**—Promotions in the medical research division were recently announced: Dr. D. I. Weisblat, as assistant director of research: Dr. Robert H. Levin,

(Continued on page 60)

NEW, clinically proven formulation...

Mephate®

Robins

In Mephate 'Robins', the clinical usefulness of mephenesin per os has been significantly heightened by the inclusion of glutamic acid hydrochloride, which improves absorption and enhances effectiveness for many patients otherwise unresponsive.* Provides a relaxant effect on skeletal muscle spasm; an ameliorating effect on tremor; and a relief of anxiety without dimming consciousness.

Particularly helpful in neuromuscular conditions such as rheumatic disorders, disc syndromes and cerebral palsy; alcoholism, anxiety tension states and psychiatric states.

Supplied: in bottles of 100 and 500 blue and white capsules.

*Hermann, I. F., and Smith, R. T.: JL.-Lancet 71:271 (July), 1951.

Your wholesaler can supply you—
Order NOW—*and be prepared!*

A. H. ROBINS CO., INC. · 75TH ANNIVERSARY

A. H. ROBINS CO., INC. · RICHMOND 20, VIRGINIA

Ethical Pharmaceuticals of Merit since 1878

Briefly Noted

• • • • • • • • • • • • • *from page 58*

as head of the chemistry department; and Dr. H. F. Hailman, as director of the department of clinical investigation. **Bristol-Myers Products Division**—Lee H. Bristol, Jr., has been recently promoted to the position of advertising manager. **Merck & Co., Inc.**—Dr. H. Boyd Woodruff has been appointed director of the Microbiological Research Department. **Sharp & Dohme, Inc.**—A. F. Thomas has been named branch manager of the Columbus branch of Sharp & Dohme. **Schering Corporation**—William H. Pace has recently been appointed chief engineer.

AT RANDOM

Over 200 Michigan pharmacists attended the December 5 meeting of the **Michigan Academy of Pharmacy** at the Rackham Memorial Building in Detroit. Dr. Lawrence B. Hobson, associate medical director of E. R. Squibb & Sons, spoke on "The Antituberculous Drugs."

H. Payson Brickley has been appointed as director of Endowments at The Franklin Institute. Mr. Brickley is the first director of Endowments, a newly created department at the Institute.

Julius Leuschner of the Prescription Pharmacy at 1050 West 6th in Los Angeles is an ardent orchid fancier. Recently, he created a full store exhibit around the theme "Orchids in Pharmacy and Medicine." The key plant in the exhibit was a climbing, tropical epiphytic orchid with spikes of greenish yellow flowers and large seed pods. It was, of course, vanilla planifolia (*v. fragrans*). For the period of the exhibit, at least, Mr. Leuschner had one of the most unusual drug store displays in the United States.

E. Claiborne Robins, president of A. H. Robins Co., Inc., Richmond, Va., has been elected to membership in Omicron Delta Kappa, national honorary leadership fraternity.

Ralph M. Ware, Jr., is the new Secretary of the Virginia Board of Pharmacy. He has previously served as chairman of the Professional Relations Committee of the Virginia Pharmaceutical Association, and has been treasurer, secretary and vice-president of the Richmond Retail Druggist Association.

The television series, "Anywhere, USA," starring Eddie Dowling and Robert Preston, being shown coast to coast through December, is jointly presented by the **American Broadcasting Company,** and **Health Information Foundation.** The filmed series dramatizes every-day episodes of Americans in their progress toward better health. The show represents a radically new use of television for educational purposes, combining authoritative health information with dramatic, entertaining technique.

Harold Hutchins, publisher of Drug and Cosmetic Newsletter and formerly editor of American Druggist, has joined the executive staff of Pantone Press, New York City, as head of the firm's new Drug Division.

On December 6, 1952, a ceremony in honor of **Professor Jose Capote Diaz,** president of the Academy of Pharmacy of Cuba, and honorary president of the National College of Pharmacy, took place in the Great Hall of the University of Havana. The presentation was made to Dr. Diaz by Dr. Héctor Zayas-Baszan of Perdomo.

HOSPITAL PHARMACY

Allen V. R. Beck, chief pharmacist at Indiana University Medical Center, Indianapolis, has been elected president of the **American Society of Hospital Pharmacists** for the 1953–1954 term. Mr. Beck has been a member of the executive committee for the past two years having served as chairman of the Committee on Program and Public Relations and of the Committee on Membership and Organization. He is a graduate of Purdue University and has held his present position since 1945.

Other officers-elect include the vice-president, Miss Adela Schneider, chief pharmacist at Southern Pacific Hospital in Houston, Tex.; and the treasurer, Mrs. Anna D. Thiel, chief pharmacist at Jackson Memorial Hospital in Miami, Fla. The secretary of the Society is nominated by the executive committee and elected annually by the A.S.H.P. House of Delegates.

Announcement of the election results was made by a committee appointed by President Bowles. Included on the committee were Henry Beard, Franklin Cooper, and Dominic Spiotti, all of Washington; and William Heller, Baltimore.

Do you have this new angle on drug profits?

MORE THAN 15,000,000 AMERICANS NEED LOW SALT DIETS*

New IODIZED NEOCURTASAL tastes like, is used like Table Salt!

When the physician says "no sodium," but the patient wants a seasoning agent for his food . . . the choice is NEOCURTASAL.

NEOCURTASAL—salt without sodium—has been favored for years by patients and doctors for palatably seasoning "low salt diets."

New, iodized NEOCURTASAL is particularly acceptable. It meets the gustatory as well as the physiologic requirements of the salt-free diet prescribed in cardiac failure, renal disease, hypertension, arteriosclerosis and pregnancy.

Keep up with the steady demand. Keep stocked up on Iodized NEOCURTASAL. Order from your wholesaler today.

Neocurtasal®

Plain or *NEW* Iodized

Neocurtasal, trademark reg. U. S. & Canada

Winthrop-Stearns INC.
1450 BROADWAY, NEW YORK 18, N. Y.
Pharmaceuticals in daily demand.
Ethically advertised and detailed.

*The estimated incidence of high blood pressure is 15,000,000. To this add more millions with heart, kidney or liver disease, pregnancy complications, etc.

STUDENT BRANCHES

December was an active month for the **Temple University Student Branch.** On December 3, Mr. Herbert L. Flack, chief pharmacist of the Jefferson Medical College Hospital of Philadelphia, was the guest speaker. He spoke on the duties and responsibilities of a practicing hospital pharmacist. On December 10, the Branch participated in a joint meeting with the Student Branch of the Philadelphia College of Pharmacy. The program consisted of a symposium with Mr. Jacob Katz, chairman of the Pennsylvania State Board of Pharmacy, as one of the featured speakers. On December 16, members and friends enjoyed a Christmas party and dance.

Approximately 65 members of the **University of Mississippi Student Branch** were present for a meeting held on December 8 in the Chemistry-Pharmacy Building. An election of officers to serve during 1953 was held and the following were elected: Howard B. Grubbs, president; Frank C. Therrell, vice-president; Clarke Johnson, secretary; and Augustus F. Carraway, III, treasurer.

On November 15, the **University of Arizona Student Branch** held its Annual Picnic for all of the students in the College and their guests. In spite of the windy weather, almost a hundred people turned out.

At the December 2 meeting of the **University of Wisconsin Student Branch,** plans for the Christmas party were reviewed. It was announced that Phyllis Dettman had been chosen the new social chairman, that Kappa Epsilon would be in charge of the entertainment, and Gene Jacobson in charge of decorations. After the business meeting, Mr. William Apple of the College faculty briefly reviewed the history of the Student Branch.

Members of the **Medical College of the State of South Carolina Student Branch** recently elected the following officers: Edsel Whaley, president; John Donald James, vice-president; J. K. Holcombe, Jr., secretary; and Furman Derrick, treasurer.

Mr. McGuire, a member of the Federal Narcotics Bureau, recently spoke before the **Loyola University Student Branch.** Following his speech, he answered questions raised by the members.

The annual Christmas dance, held Dec. 7, was a big success. The entertainment at intermission was provided by a quartet (The Three Mortars and a Pestle)—Jerry Patton, Oscar Perez, Claude Riche, and Saul Schneider. Edward Skinner sang a solo. Master of Ceremonies was C. J. Drouillet.

On December 2, nearly two hundred members of the **Massachusetts College of Pharmacy Student Branch** attended a talk given by David L. Coffin V.M.D. Dr. Coffin, a pathologist at Angell Memorial Hospital and instructor of Pathology at Harvard Medical School, talked on "Adventures in Animal Research." The lecture was illustrated with Kodachrome slides.

On November 13, the meeting of the **New England College of Pharmacy Student Branch** was called to order by the president, Mr. Albert Cataldo, who turned the meeting over to Dean Meriano. He, in turn, introduced Dr. Melvin W. Green, who spoke on the progress made in pharmaceutical education during the past decade. Dr. Adamo and Mr. Silverman of the Board of Trustees also said a few words.

The annual Christmas party of the **University of Utah Student Branch** was held on December 10, 1952. A turkey dinner with all the trimmings was served at the Union Building cafeteria.

The newly elected officers of the **Brooklyn College of Pharmacy Student Branch** are: Sheldon Berrol, president; Gerold Schumckler, 1st vice-president; Harry Berger, 2nd vice-president; and Milton Maron, secretary.

At the December 10 meeting of the **State University of Iowa Student Branch,** Floyd Domer, Union Board Representative, gave a report of Union Board activites. It was announced by Bruce Beekman, chairman of prom committee that the date scheduled for the prize prom is February 27, 1953, from 9–12 p. m. at the Memorial Union, with Larry Barrett's Orchester supplying the music. Dean Emeritus Teeters spoke on his experiences in the field of Toxicology.

A note from the **University of Colorado Student Branch** states: "We enjoyed very much your broadcast of the Centennial observance."

The **University of Wyoming Student Branch** held the Founders' Day Program on October 7 in the Ball Room of the Wyoming Student Union Building on the Wyoming University Campus. The reception of the closed circuit broadcast from Washington was excellent. The meeting was well attended by regular members of the Branch and their guests. Both the members and invited guests were very grateful to the national organization for the opportunity to participate in this outstanding program of historical significance. Refreshments were served after the completion of the broadcast and everyone considered the meeting to be a complete success. (An excerpt from a letter by the University of Wyoming Student Branch.)

At the November, 1952, meeting of the **University of Maryland Student Branch,** the constitution was ratified. The meeting was adjourned early so that the members could join the Baltimore Branch meeting and watch a demonstration on the manufacture of fever thermometers.

Colonel Black of the United States Army spoke at the December 11 meeting of the Branch. His topic was "The Pharmacist in the Draft, and His Place in the Services of His Country." A question period followed.

LOCAL BRANCHES

On December 11, the **Philadelphia Branch** of the A. PH. A. gave a dinner at Temple University, School of Pharmacy, and a meeting was held afterwards in the School of Pharmacy Auditorium. Dr. Charles M. Gruber, Jr., associate professor of Pharmacology, Jefferson Medical College, spoke on "Blood Coagulation and a New Prothrombin Time Technique."

At the November 10, 1952, meeting of the **New York Branch** of the A. PH. A. held at the Fordham University College of Pharmacy, upwards of 125 members and friends were present. The speaker, Dr. Cornelius Sullivan, Medical Division, Ciba Pharmaceutical Products, Inc., spoke on "Progress in the Drug Therapy of Hypertension."

On January 12, the New York Branch met at the St. John's University College of Pharmacy. The Student Branch presented a program commemorating the centennial of the AMERICAN PHARMACEUTICAL ASSOCIATION.

The **Northern New Jersey Branch** held its November 12, 1952, meeting at Rutgers College of Pharmacy. Dr. Morton Rodman briefed the newer therapeutic drugs, emphasizing the new antibiotic "Ilotycin." The speaker for the evening was Mr. Joseph H. Stamler, attorney, who spoke on the problem: "Can Pharmacy Do a Better Job of Supervising the Ethics and Morals of Those in the Profession?"

Throughout the spring, the following programs will be held by the Northern New Jersey Branch: February 11, 1953, "Problems Involved in Product Duplication" by Frazier Cheston, Trade Relations Dept., Smith, Kline & French Labs; March 4, 11, 18, 25, 1953, Seminar Program—lectures to include trends in Endocrinology, Geriatrics, Diabetics, and Cancer; April, 1953, joint meeting with medical, dental, chiropodial, and nursing professions—"Drug Treatment of Neurological and Mental Disturbances" will be the topic; and May 6, 1953, "The Year Ahead for Pharmacy" by Dr. R. L. Swain, editor of *Drug Topics*.

The eighth and final meeting of the year 1952 of the **Greater Los Angeles Branch** of the A. PH. A. was held November 20 at the Queen of Angels' Hospital Auditorium. The nominations committee presented their report and the following officers were elected: Dr. Orville Miller, president; Florence Martin, vice-president; Lorne Person, secretary; and George Jundt, treasurer.

A panel, consisting of Mr. Kennedy, accountant; Mr. Joseph Ball, hospital pharmacist; Mr. Hermann, neighborhood retail pharmacist; Mr. Malloy, prescription store pharmacist, discussed prescription pricing and problems peculiar to their particular situations.

THE *Pharmacy* OF TOMORROW requires an unique type of training.
Equip your Son or Daughter for interesting and successful careers in Pharmacy through B.Sc. degree course at this institution, oldest but most modern of its kind in the Americas. Graduate studies and research lead to M.Sc. and D.Sc. degrees. Degree courses also offered by Schools of Bacteriology, Biology and Chemistry. Write for free catalog.

Philadelphia
COLLEGE OF PHARMACY AND SCIENCE
43rd St., Kingsessing and Woodland Aves., Philadelphia 4, Penn. Founded in 1821.

A. A. A. S. Holds Annual Meeting

The central theme of the 1952 annual meeting of the American Association for the Advancement of Science, held December 26 to 31 in the Kiel Municipal Auditorium in St. Louis, Missouri, was "The Common Ground of Science, Engineering, and Industry." The keynote for the general theme was established by two general symposiums on "Disaster Recovery" and on "The Nation's Nutrition," held early in the convention week.

The A. A. A. S. is the world's greatest federation of scientific and related professional organizations. Its membership is composed of affiliated and associated scientific societies and more than 45,000 individual members. The affiliated organizations representing pharmacy include the AMERICAN PHARMACEUTICAL ASSOCIATION, the American Society of Hospital Pharmacists, the American Association of Colleges of Pharmacy, and the American College of Apothecaries.

In order to provide programs of specialized interest for approximately 100 scientific organizations affiliated or associated with the A. A. A. S. more than 80 separate programs, including symposiums and the presentation of papers on scientific subjects, were arranged for the 1952 meeting.

The Subsection on Pharmacy of the Medical Science Group held four meetings during two days of the convention. Several papers reporting the results of original research of pharmaceutical interest were presented, and three symposiums were conducted jointly with representatives of the A. PH. A., the A. S. H. P., the A. A. C. P., and the A. C. A. participating. The subjects of the symposiums included panel discussions on accreditation of hospital pharmacies, content of hospital pharmacy courses in schools of pharmacy, and the role of the U. S. P., the N. F., the N. N. R., and the A. D. R. in developing and maintaining sound drug therapy trends and standards. Dean Glenn L. Jenkins, of the School of Pharmacy at Purdue University, is the secretary of the Pharmacy Subsection, and the program chairman for the 1952 meeting was Dr. George F. Archambault of the United States Public Health Service, Washington, D. C.

The A. PH. A. was represented in the A. A. A. S. Annual Exposition of Science and Industry which is composed of exhibits of scientific interest. For a description of this A. PH. A. display see page 44.

ADVERTISING INDEX

Abbott Laboratories (Iberol) ..... inside front cover
A. PH. A. Drug Standards 17
Armour Laboratories (Thyrar) 1
Hoffmann-La Roche ..... inside back cover
Hynson, Westcott and Dunning ..... outside back cover
Lederle Laboratories (Aureomycin) 10
Eli Lilly and Co. (Homicebrin) 18
S. E. Massengill Co. (Aminodrox) 49
Merck and Co., Inc. (Cortone) 5
Nepera Chemical Co., Inc. (Biomydrin) 55
Nion Corporation (Nio-A-Let) 53
Owens-Illinois Glass Co. 45
Parke, Davis and Co. (Chloromycetin) 3
Chas. Pfizer and Co. (Terramycin) 7
Philadelphia College of Pharmacy and Science 63
A. H. Robins Co., Inc. (Mephate) 59
Schering Corporation (Tricombisul) 47
Sharp and Dohme, Inc. (Penalev) 51
E. R. Squibb and Sons (Pentids) 9
Sunkist Growers (Pectin N. F.) 8
U. S. Vitamin Corporation (Vi-syneral) 54
Warner-Chilott Laboratories, Inc. (Methium) 43
Winthrop-Stearns, Inc. (Neocurtasal) 61
Wyeth, Inc. (Bicillin) 2

MONTHLY DRUG INDEX

Almenic 12
Biomydrin 11
Codempiral 11
Gantricillin 13
G-B-S 11
Gelfoam powder 13
Gericin 11
Glyotol 11
Harvoglobin 11
Histoplasmin 13
Milkinol 13
Myciguent cream 13
Neosone Ophthalmic ointment 11
New Penicillin doses 13
Sedesin 12
Syncrobin Suppositories 13
Tensodin 12
Theridol Kapseals 12
Tosanon 12
Tyotocin ear drops 12
Tyrophyll Troche 12
Urokon Sodium Sterile Solution 70% 13
Vergitryl Intramuscular 13

when healing lags...

Chloresium®

brand of water-soluble chlorophyll derivatives

ointment · solution (plain)

proves its value to the physician

in wounds

"Granulation tissue seemed to be of finer texture, more firm and to form more rapidly with chlorophyll (CHLORESIUM)..."[1]

in decubitus ulcers

"...a most effective agent is generally agreed to be chlorophyll ointment and liquid."[2]

in pilonidal cyst wounds

"The main advantage...is a prompt, clean healing with firm granulation."[3]

in other resistant lesions

"CHLORESIUM...an active agent in restoring affected tissues to a state conducive to normal repair..."[4]

"...effective agents in facilitating growth of granulation tissue and epithelization."[5]

1. Bowers, W. F.: Am. J. Surg. *73*:37, 1947.
2. Pollock, L. J., and others: J. A. M. A. *146*:1551 (Aug. 25) 1951.
3. Niemiro, B. J.: Journal Lancet *71*:364, 1951.
4. Lowry, K. F.: Postgrad. Med. *11*:523, 1952.
5. Combes, F. C.; Zuckerman, R., and Kern, A. B.: New York State J. Med. *52*:1025, 1952.

Literature containing comprehensive information on the uses of chlorophyll in medicine will be forwarded on request. Reprints of recent papers are also available.

CHLORESIUM OINTMENT and SOLUTION (Plain) contain water-soluble derivatives of chlorophyll "a" as standardized in N.N.R. These derivatives, highly concentrated and purified, provide the optimum therapeutic benefits obtainable from chlorophyll.

CHLORESIUM OINTMENT—1-ounce and 4-ounce tubes.

CHLORESIUM SOLUTION (Plain)—2-ounce and 8-ounce bottles.

Rystan company inc.

Mount Vernon, New York

THE PRACTICABLE SOLUTION OF

obesity control

A patient on Obedrin Tablets can maintain a restricted diet, in comfort and lose excess weight fairly rapidly, without undesirable side effects.

Each Obedrin Tablet contains:

SEMOXYDRINE HYDROCHLORIDE, 5 mg.
(Methamphetamine Hydrochloride)
Suppresses appetite, elevates mood.

THIAMINE HYDROCHLORIDE, 0.5 mg.;
RIBOFLAVIN, 1 mg.; NIACIN, 5 mg.
Dose of these essential vitamins is adequate to supplement the 60-10-70 Diet, yet low enough to prevent stimulation of appetite.

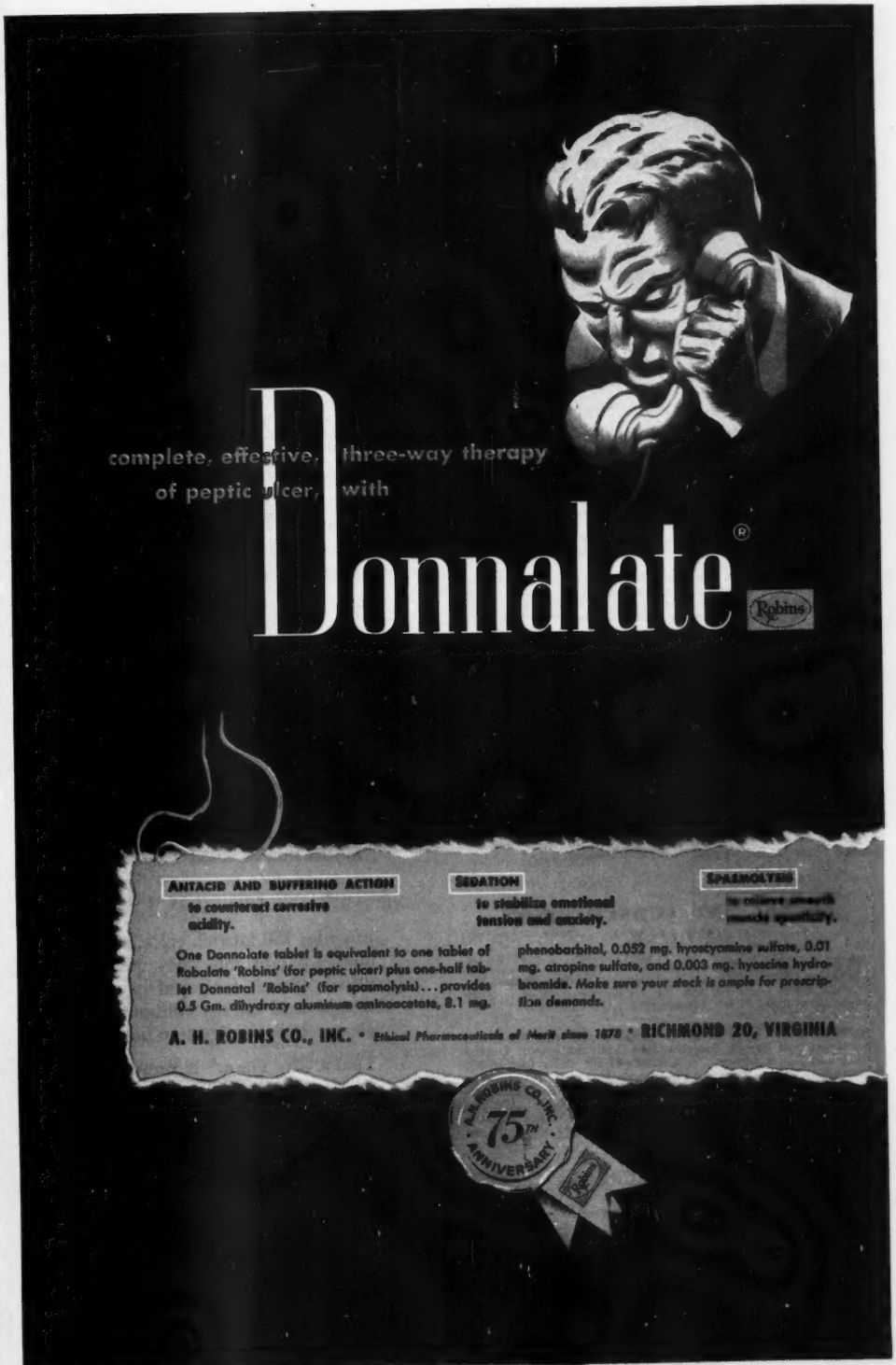
ASCORBIC ACID, 100 mg.
A large dose, to help mobilize tissue fluids, so often a problem in obese patients.

PENTOBARBITAL, 20 mg.
To avoid excitation and insomnia; counteracts undesirable cerebral stimulation of methamphetamine. Does not diminish the anorexigenic action of methamphetamine.

A complimentary pad of 60-10-70 Basic Diet Sheets and a trial supply of Obedrin sent to physicians on request.

AND THE
60-10-70 BASIC DIET

S.E. Massengill
BRISTOL, TENNESSEE


complete, effective, three-way therapy
of peptic ulcer, with
Donnalate®
Robins
ANTACID AND BUFFERING ACTION
to counteract corrosive acidity.
SEDATION
to stabilize emotional tension and anxiety.
SPASMOLYSIS
to relieve smooth muscle spasticity.
One Donnalate tablet is equivalent to one tablet of Robalate 'Robins' (for peptic ulcer) plus one-half tablet Donnatal 'Robins' (for spasmolysis)... provides 0.5 Gm. dihydroxy aluminum aminoacetate, 8.1 mg. phenobarbital, 0.052 mg. hyoscyamine sulfate, 0.01 mg. atropine sulfate, and 0.003 mg. hyoscine hydrobromide. Make sure your stock is ample for prescription demands.
A. H. ROBINS CO., INC. • Ethical Pharmaceuticals of Merit since 1878 • RICHMOND 20, VIRGINIA
A.H. ROBINS CO., INC. 75th ANNIVERSARY
Robins

OFFICERS OF THE ASSOCIATION

President.....Richard Q. Richards
Honorary President.....Rufus A. Lyman
First Vice-President.....Thomas D. Rowe
Second Vice-President.....Charles F. Lanwermeyer
Secretary and General Manager.....Robert P. Fischelis
Treasurer.....Hugo H. Schaefer

OFFICERS, HOUSE OF DELEGATES

Chairman.....E. M. Josey
Vice-Chairman.....Paul W. Wilcox
Secretary.....Robert P. Fischelis

MEMBERS OF THE COUNCIL

Elected Members: Martin E. Adamo, Walter M. Chase, B. V. Christensen, H. A. B. Dunning, Henry H. Gregg, Glenn L. Jenkins, *vice-chairman;* Ernest Little, *chairman;* George A. Moulton, W. Arthur Purdum. *Ex-officio Members:* R. P. Fischelis, *secretary;* Don E. Francke, E. M. Josey, Charles F. Lanwermeyer, R. Q. Richards, Thomas D. Rowe, Hugo H. Schaefer, *treasurer.*

SECTION CHAIRMEN AND SECRETARIES

Scientific Section: Ole Gisvold, chairman; Ray S. Kelley secretary, Massachusetts College of Pharmacy, 179 Longwood Ave., Boston 15, Mass.

Section on Practical Pharmacy: Elmer M. Plein, chairman; Samuel W. Goldstein, secretary, 2215 Constitution Ave., N.W., Washington 7, D. C.

Section on Education and Legislation: J. L. Voigt, chairman; Robert A. Walsh, secretary, 179 Longwood Ave., Boston, Mass.

Section on Pharmaceutical Economics: Alvah G. Hall, chairman; Irving Rubin, secretary, 128 Marine Ave., Apt. 1-H, Brooklyn 9, N. Y.

Section on Historical Pharmacy: Edward S. Brady, chairman; Edward J. Rowe, secretary, 5819 E. Washington St., Indianapolis 1, Ind.

ADMINISTRATIVE STAFF

Robert P. Fischelis, Phar.D. Sc.D., secretary and general manager; Felix B. Gorrell, controller and office manager.

Justin L. Powers, Ph.D., National Formulary and *Scientific Edition* of THE JOURNAL OF THE A. PH. A.; Bernard Zerbe, A.B., *Practical Pharmacy Edition* of THE JOURNAL OF THE A. PH. A.; Samuel W. Goldstein, Ph.G., Ph.D., laboratory; Don E. Francke, Sc.D. and Gloria Niemeyer, B.Sc., hospital pharmacy; Mary Louise Bergner, A.B., membership.

POSTAL AND SUBSCRIPTION NOTICE

PUBLISHED by the American Pharmaceutical Association. Publication Office: 20th and Northampton Streets, Easton, Pa. Editorial office (and address for all correspondence): 2215 Constitution Ave., N.W., Washington 7, D. C.

ANNUAL SUBSCRIPTION—Journal of the American Pharmaceutical Association complete (both editions): United States and Pan American $7; Canada $7.70; other foreign $8; members of the American Pharmaceutical Association with dues, $4. Each edition, Scientific Edition or Practical Pharmacy Edition: United States and Pan American $4; Canada $4.35; other foreign $4.50. Single numbers, either edition: United States and Pan American $0.35; Canada $0.40; other foreign $0.50.

CHANGE OF ADDRESS—Four weeks' notice is required. Please address your request to the American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington 7, D. C.; and give the old as well as the new address.

JOURNALS LOST IN MAILS cannot be replaced if due to failure to notify of change of address 30 days in advance, or if claim is made after lapse of three months.

ENTERED as second-class matter January 23, 1917 at the Post Office at Easton, Pennsylvania, under the act of March 3, 1879 as 24 times a year; Scientific Edition monthly on the 5th; Practical Pharmacy Edition monthly on the 20th. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 10, 1918.

[ORAL FAT EMULSION SCHENLEY]

provides 150 fat-rich calories *per ounce*—in unusually tasty, quickly utilized form—for rapid gain in weight and energy without excessive bulk or digestive burden.

That's why EDIOL* is prescribed by doctors throughout the land ...why it *pays* to keep EDIOL in stock.

In 16-oz. bottles.

SCHENLEY LABORATORIES, INC.
LAWRENCEBURG, INDIANA

schenley

*Trademark of Schenley Laboratories, Inc.
© Schenley Laboratories, Inc.

New A.Ph.A. Members

THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE.

NEW LIFE MEMBERS

Mill, Ralph J., Detroit 1, Mich.
Penick, S. Barksdale, New York, N. Y.
Putt, Earl B., New York, N. Y.

ARIZONA

Srutwa, Peter C., Phoenix

CALIFORNIA

Alexander, W. Frank, San Francisco
Hoffman, William E., Stockton
Johnson, Howard E., Riverside
Jones, Clyde G., San Francisco
Konikoff, Robert S., Los Angeles
McKelvey, Lewis W., Rialto
Miles, Norval W., Lincoln
Tom, William K., San Francisco

DISTRICT OF COLUMBIA

Samaha, Leslie H.

FLORIDA

Allen, Charles F., Tampa
Allen, W. R., Tampa
Baker, James F., Sr., Bradenton
Canova, Frank A., Gainesville
Crawford, R. V., Sr., Orlando
Darling, Roy L., Sebring
Dick, James M., Venice
Evans, James H., Orlando
Fisler, O. L., Miami
Heda, Albert A., Miami
Holbrook, F. C., St. Petersburg
Hughes, James E., Oviedo
Kroser, Charles, Jacksonville
McClain, Howard, Jr., Tallahassee
Murphy, Elmer G., Tampa
Pinover, John S., Miami
Scholl, Clemens F., Miami
Smith, McFerrin, Deland
Stevens, George R., Miami

GEORGIA

Carroll, Herbert B., Atlanta

IDAHO

Leisher, L. Byron, Boise

ILLINOIS

Lathrop, Lyle B., North Chicago
Ross, A/1C James D., Chanute A. F. B., Rantoul

INDIANA

Etherington, Marshall D., Indianapolis
Hodge, Edward B., Terre Haute

KENTUCKY

McEvoy, Donald V., Lexington

LOUISIANA

Paredes, Marco L., New Orleans

MICHIGAN

Brown, Robert, Plymouth
Moir, John G., Ann Arbor

MISSISSIPPI

Diggs, John A., Greenwood
Roberts, John B., Winona
Straughan, Richard G., Biloxi

MISSOURI

Horton, L. Y., St. Louis

NEW HAMPSHIRE

Forman, James A., Lebanon

NEW JERSEY

Aaron, Bernard, Newark
Price, Wilbur W., Atlantic City
Rago, Kenneth V., Maywood
Stein, Kalman W., Paterson
Trachtenberg, Abraham, Bloomfield

NEW YORK

DeMurio, Michael P., Syracuse
Shaffer, Stanley, Brooklyn
Starman, Arthur, Albany
Valenti, Anthony S., Hempstead, L. I.
Weintraub, Florence, New York
Winters, Harry E., Newark

NORTH CAROLINA

Martin, Robert M., Ahoskie
Swicegood, Shirley W., Raleigh

OHIO

Epstein, Irving, Cleveland

OKLAHOMA

Skillern, Homer D., Oklahoma City

OREGON

Doherty, R. J., Oswego

PENNSYLVANIA

Bambrick, Vincent C., Pottsville
Block, Jack J., Philadelphia
Matthews, Richard J., Jr., Philadelphia
Shoop, Clyde E., Philadelphia

SOUTH CAROLINA

Freeman, James M., Columbia
Breedin, C. S., Anderson

TEXAS

Ellifrit, 1st Lt. William O., El Paso
Pfluger, A. W., Jr., Bellaire

VERMONT

Cochrane, Leo P., Randolph

VIRGINIA

Saul, Alan W., Norfolk

WASHINGTON

Karsh, Max L., Seattle

WISCONSIN

Anderson, Irving A., Milwaukee
Kniss, Robert L., Wauwatosa
Kubiak, Thomas T., Milwaukee
Ziller, Raymond J., Milwaukee

Deceased Members

Collins, John G., Tolleson, Ariz.
MacGregor, M., Versailles, Mo., Dec. 1, 1952
Miller, Albert, Chicago, Ill., (Life Member)
Patterson, James N., Salinas, Calif.
Rhodehamel, Harley Wesley, Indianapolis, Ind., April 8, 1952
Schimpf, Fred W., Sr. Orwigsburg, Pa.
Spangler, Harry A., Philadelphia, Pa., Jan. 2, 1953
Sveinson, H. Lindal, Union, Oreg., Nov., 1952

COME TO PHILADELPHIA FOR PHARMACY

Young men and women from many portions of the United States and from many foreign countries realize the advantages of studies in Pharmacy leading to B.Sc. degrees at this institution, oldest yet most modern of its kind in the Americas.

Graduate studies lead to M.Sc. and D.Sc. degrees. Schools of Chemistry, Bacteriology and Biology also. Write for free catalog.

PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE

43rd St., Woodland and Kingsessing Aves., Philadelphia 4, Pa. Founded in 1821.

RECENT

PROGRESS IN MEDICINE

Use of Mild Nose Drops Desirable

Dr. Noah D. Fabricant of Mount Sinai Hospital, Chicago, clarifies the value of nose drops in a special paper appearing in the January 3, 1953, issue of the *Journal of the American Medical Association.* "Mild (aqueous) nose drops that offer relief from nasal congestion and the common cold can be used for short periods of time without fear of harmful effects, and are desirable to relieve the uncomfortable feeling brought on by such conditions." Dr. Fabricant noted that many of these preparations were available "over-the-counter" but he felt that it would be preferable if they were obtained on the advice of a physician, due to the different types available.

Child's First Teeth Highly Important in Dental Care

The belief that a child's first teeth are unimportant "because they fall out anyway" has added immeasurably to the staggering toll of adult dental disease, according to the president of the American Dental Association. In a statement issued on the eve of the fifth annual observance of National Children's Dental Health Day, February 2, 1953, Dr. Otto W. Brandhorst of St. Louis said that care of teeth in childhood determines to a substantial degree the state of the individual's dental health throughout adult life. "More than 90 per cent of boys and girls have an advanced state of tooth decay by age 16, with an average of seven affected teeth." Dr. Brandhorst noted that "the future dental health of our children lies in the hand's of today's adults," and suggested four rules of dental health for children. Proper use of the tooth brush immediately after eating, maintenance of a well balanced diet, early detection and treatment of dental disease, and fluoridation of community water supplies. "Fluoridation," he observed, "is the most effective large-scale means ever devised for the prevention of dental decay." Nearly 600 communities have such a program now in operation.

Rauwolfia Serpentina in Hypertension

The Serpina tablets, representing the therapeutic effect of *Rauwolfia serpentina*, were administered to more than 100 hypertensive patients by Drs. R. W. Wilkens and W. E. Judson, according to a report in *The New England Journal of Medicine*, January 8, 1953. The report indicates that these tablets cause sedation and improve sleep, although occasionally they cause nightmares. The tablets seem to be well tolerated, although chronic effects may not become fully apparent in less than six weeks. No serious side effects are reported, although the investigators found the drug to cause bradycardia, nasal congestion, increase in weight, and slightly increased bowel action. The drug is apparently not habit forming and may be used as an adjunct to more powerful hypertensive drugs. Tablets for experimental purposes were obtained by the investigators from the Himalaya Drug Co., Bombay, India, through E. R. Squibb and Sons in New York.

The Newer Antihypertensive Drugs

Noting that the recent discovery of drugs such as hexamethonium and 1-hydrazinophthalazine (Apresoline), which are much more effective in maintaining a lowered blood pressure, constitutes a major advance in the control of hypertension, Dr. Paul W. Clough points out the dangers connected with their use in an editorial in the January, 1953, issue of the *Annals of Internal Medicine.* Summarizing his views, Dr. Clough writes: "Treatment with these drugs is still in the experi-

(*Continued on page 72*)

NEW

CORICIDIN WITH CODEINE

UNUSUAL RELIEF FOR

- DISTRESSING SYMPTOMS OF COLDS
- AND FOR PAIN

CORICIDIN® *with Codeine ¼ gr. or ½ gr.*

Each coated *tablet* contains:

Aspirin	0.23 Gm. (3½ gr.)
Acetophenetidin	0.15 Gm. (2½ gr.)
Caffeine (alkaloid)	0.03 Gm. (½ gr.)
CHLOR-*TRIMETON*® maleate†	2.0 mg. (1/30 gr.)
Codeine phosphate*	0.016 Gm. (¼ gr.)
	or 0.03 Gm. (½ gr.)

*Subject to Federal Narcotic Regulations.
†Brand of chlorprophenpyridamine maleate.

Schering

CORPORATION · BLOOMFIELD, NEW JERSEY

CORICIDIN WITH CODEINE

Progress in Medicine

• • • • • • • • • • • • • *from page 70*

mental stage, particularly in combination. They are powerful agents, dangerous if clumsily used." Dr. Clough urged that treatment be started in a hospital and continued there until a relatively stable dosage is established. After that, close observation of the patient is imperative. In his review, Dr. Clough reported on clinical findings of some of the physicians who have employed these new drugs.

Roniacol in Arteriosclerosis

Drs. Martin M. Fisher and Harry E. Tebrock, writing in the *New York State Journal of Medicine*, January 1, 1953, reported that Roniacol markedly benefited a group of more than 100 patients suffering from faulty blood circulation, and the resultant pain, dizziness and ulceration common to arteriosclerosis. The physicians treated 134 patients suffering from impaired circulation in the feet. Of this group, 84 suffered intense pain and weakness in the feet when walking; after treatment, complete disappearance of these symptoms was noted in 51 of the 84 patients, and improvement was noted in the remainder. Fifteen patients suffered from ulcers on their feet; 13 healed under treatment with Roniacol. Dizziness was cleared in 8 out of 12 patients. The tablets were taken in doses ranging up to 1.2 Gm. per day, without toxic effect.

Bicillin May Prevent Rheumatic Fever Recurrences

The new penicillin compound, Bicillin, which is not readily absorbed by the body, may offer prolonged protection against recurrences of rheumatic fever, according to studies just completed by two New York physicians. Writing in the December 20, 1952, issue of the *Journal of the American Medical Association*, Drs. G. H. Stollerman and Jerome H. Rusoff report that tests have shown that after administration of a single intramuscular injection of 1,250,000 units, sufficient prophylactic amounts of the drug remain in the body for periods ranging to four weeks The doctors used varying doses in the treatment of 135 children and eight adults who were known rheumatic sufferers. The doctors also pointed

(Continued on page 74)

DEPENDABLE DRESSINGS
for FIRST AID, for EMERGENCY
for DISASTER, for DEFENSE
With a distinguished record of use by the medical services of the Armed Forces, by other governmental agencies, by hospitals, by emergency and disaster units, by industrial clinics and first-aid stations . . .
Now in three sizes:
No. 1: 3" x 36" (6 in carton)
No. 2: 3" x 18" (12 in carton)
No. 3: 6" x 36" (6 in carton)
Vaseline Petrolatum Gauze Dressing Sterile
VASELINE STERILE PETROLATUM GAUZE DRESSINGS
...always STERILE, always READY for immediate and easy application to dress a burn, an abrasion, and other surface injuries.
have been adopted by surgeons as standard procedure, by nurses as preferred matériel, by professionally-trained aid personnel as the compact, ready-made, ready-to-apply dressing of their choice.
CHESEBROUGH MFG. CO., Cons'd
Professional Products Division • New York 4, N. Y.
Available through your Local Wholesaler or our Sales Representative, the Colgate-Palmolive-Peet Co.
VASELINE IS THE REGISTERED TRADE-MARK OF THE CHESEBROUGH MFG. CO., CONS'D

Greater Relief in the COMMON COLD

The concept that allergic tissue responses are important contributory factors in upper respiratory infections, particularly the common cold, has been widely accepted. To combat these allergic manifestations more successfully, Thenfadil — one of the most effective and best tolerated antihistaminics — has been combined with the time-tested A.P.C. formula commonly used for the symptomatic treatment of the common cold.

Detailing and medical advertising will send profitable prescriptions your way during the coming months.

Are you adequately stocked?

THENFADIL® A.P.C.

Each tablet contains:

Thenfadil hydrochloride	15 mg. (¼ grain)
Acetylsalicylic acid	0.3 Gm. (5 grains)
Phenacetin	0.2 Gm. (3 grains)
Caffeine	15 mg. (¼ grain)

Supplied in bottles of 50 tablets.

dose:

Adults, 1 tablet as soon as possible at the onset of a cold; thereafter 1 tablet every four hours for three or four days. A similar dosage is indicated for the symptomatic treatment of established colds.

Winthrop-Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Thenfadil, trademark reg. U.S. & Canada, brand of dethylandiamine [N,N-dimethyl-N'-(3-thenyl)-N'-(2-pyridyl)ethylenediamine]

Progress in Medicine

• • • • • • • • • • • • • • *from page 72*

out that the new compound may also prove effective in the treatment and prevention of such diseases as pneumonia, gonorrhea, meningitis, and syphilis. The physicians concluded, "The data presented indicate that it is possible to maintain low serum levels of penicillin continuously in a high percentage of rheumatic children by relatively infrequent intramuscular injections of bicillin."

Alevaire in Preventing Infant Suffocation

Thick mucous secretions are one of the major causes of infant suffocation, causing a substantial portion of the 28,000 annual infant deaths from respiratory difficulties. To prevent such deaths, Dr. Samuel F. Ravenel of Greensboro, N.C., has reported promising results with Alevaire, which contains a new alkyllauryl polyether alcohol wetting agent with sodium bicarbonate and glycerin, administered as a fine vapor. The patient breathes the vapor while in an oxygen tent, or it may be delivered from a nebulizer directly into a croup tent. The new drug is an outgrowth of tests conducted at Sea View Hospital, New York, which showed that the vapor mist thinned or dissolved heavy secretions present in pulmonary tuberculosis. Using the vapor, according to Sea View physicians, "converts a hopeless case to an improving case within four hours, and to a normal one within 24." Winthrop-Stearns supplies Alevaire in bottles of 500 cc.

Oxytetracycline Generic Name for Terramycin

Chas. Pfizer & Co. has announced that "Oxytetracycline" has been selected as the generic name for Terramycin, following the recent discovery of its chemical structure. The new name is descriptive of the chemical nature of the antibiotic with its high oxygen content, four ring nucleus, and attached dimethylamino group. The term "oxytetracycline" has been accepted by the World Health Organization Sub-Committee on Non-Proprietary Names, and the Council on Pharmacy and Chemistry of the American Medical Association.

Exchange

PECTIN N.F.

(PURIFIED POLYGALACTURONIC ACID METHYL ESTER)

FOR MEDICINAL AND PHARMACEUTICAL USES

•

Made from Our Own California Citrus Fruits

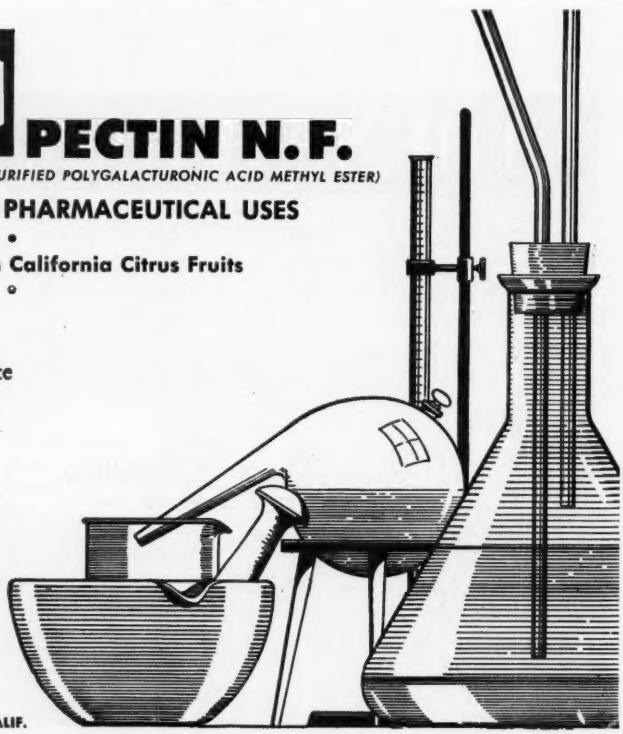
•

Also regularly supplied to pharmaceutical firms:

Sodium Calcium Galacturonate
Hesperidin Methyl Chalcone
Lemon Peel Infusion, dried
Pectin N. F. with dextrose
Citrus Bioflavonoids
Sodium Polypectate
Pectin Albedo
Pectin, L. M.
Pectic Acid
Hesperidin
Naringin

•

SUNKIST GROWERS
PRODUCTS DEPARTMENT • ONTARIO, CALIF.



NEW PRESCRIPTION PRODUCTS

All items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists, through these pages, will have full information at the same time, or even before, products are detailed to the physician. For inclusion in this free editorial department, send descriptive literature to the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, *2215 Constitution Avenue, N. W., Washington, D. C. Where possible, all descriptions should follow the style shown on these pages.*

DANILONE

Description: Each tablet is composed of 2-phenylindane-1, 3-dione (phenindione).

Indications: In anticoagulant therapy for myocardial infarction, thrombophlebitis, and other circulatory disorders in which thromboembolic complications are usually experienced.

Administration: As directed by the physician.

Form Supplied: 50 mg. tablets for oral administration, in bottles of 100 tablets.

Source: Schieffelin & Co., New York, N. Y.

DESOXETS

Description: Each pink-coated tablet contains: Desoxyn (methamphetamine), 5 mg.; vitamin B_{12}, 1 mcg.; vitamin A (synthetic), 5000 U.S.P. units; vitamin D, 500 U.S.P. units; thiamine mononitrate, 3 mg.; riboflavin, 2.5 mg.; nicotinamide, 20 mg.; pyridoxine hydrochloride, 0.5 mg.; pantothenic acid, 5 mg.; and ascorbic acid, 50 mg.

Indications: For use wherever a sympathomimetic amine is indicated along with adjunctive multi-vitamin treatment.

Administration: One tablet taken immediately upon arising and another about an hour before lunch.

Form Supplied: Bottles of 100 and 1000 tablets.

Source: Abbott Laboratories, North Chicago, Ill.

DONNALATE TABLETS

Description: Each yellow tablet contains: dihydroxy aluminum aminoacetate, 0.5 Gm.; phenobarbital, 8.1 mg.; hyoscyamine sulfate, 0.052 mg.; atropine sulfate, 0.01 mg.; and hyoscine hydrobomide, 0.003 mg.

Indications: For use in the medical management of peptic ulcer.

Administration: One or two tablets administered orally at intervals established by the physician, with double doses recommended in the late evening and at bedtime.

Form Supplied: Bottles of 100 and 500 tablets.

Source: A. H. Robins Co., Inc., Richmond, Va.

ELPAGEN

Description: Each orange colored uncoated tablet contains: sodium salicylate, 5 gr.; sodium paraaminobenzoate, 3 gr.; salicylamide, 1/2 gr.; ascorbic acid, 30 mg.; and dihydroxy aluminum aminoacetate, 1/2 gr.

Indications: For use in the symptomatic treatment of rheumatic fever, rheumatoid arthritis, neuralgia, gout, fibrositis, headache, muscular pains and in other conditions where high salicylate levels are desirable.

Administration: One or two tablets as directed by the physician.

Form Supplied: Bottles of 100 and 500 tablets.

Source: The E. L. Patch Company, Stoneham, Mass.

LIPOCHOLAN

Description: Each white, uncoated tablet contains: dehydrocholic acid, 125 mg., and choline bitartrate, 350 mg.

Indications: For treatment of hepatobiliary disturbances; also provides important adjunctive therapy in atherosclerosis, uncontrolled diabetes mellitus, and disturbed fat metabolism.

Administration: Recommended average adult dose is two tablets, two or three times daily, after meals.

Form Supplied: Bottles of 100, 500, and 1000 tablets.

Source: Maltbie Laboratories, Inc., Newark, N. J.

MABUTONE TABLETS

Description: Each tablet contains: butabarbital 8 mg.; d-amphetamine phosphate, 2.5 mg.; and mephenesin, 250 mg.

Indications: For use in a wide variety of psychotic, neurotic and psychoneurotic conditions to provide symptomatic relief from anxiety, inward tension, nervousness, mental depression and various emotional disturbances.

Administration: Recommended adult dose is

(*Continued on next page*)

one to two tablets, three times daily, immediately after meals.

Form Supplied: Bottles of 50, 100, and 1000.

Source: Reed & Carnrick, Jersey City, N. J.

MIXIRO

Description: Each sugar-coated orange tablet contains: ferrous sulfate, exsiccated, 100 mg.; ferrous gluconate, 100 mg.; reduced iron, 200 mg.; copper gluconate, 7.5 mg.; and vitamin B_{12}, 1.5 mcg.

Indications: For the common hypochromic microcytic anemias of pregnancy, chronic blood loss, menorrhagia or malnutrition.

Administration: One or two tablets three times daily after meals.

Form Supplied: Bottles of 100, 500, and 1000 tablets.

Source: S. F. Durst & Co., Inc., Philadelphia, Pa.

VI-ANDRO

Description: Each capsule contains methyltestosterone U.S.P., 10 mg.; vitamin A, 5000 U.S.P. units; vitamin D 500 U.S.P. units; dl, alpha tocopheryl acetate 1 mg.; vitamin B_{12}, 1 mcg.; thiamine mononitrate, 5 mg.; riboflavin, 5 mg.; niacinamide, 20 mg.; pyridoxine HCl, 0.5 mg.; d, calcium pantothenate, 5 mg.; and ascorbic acid, 50 mg.

Indications: For duotherapeutic treatment in the so-called "male climacteric," hypogonadism, and other androgen deficiency states in the male.

Administration: As directed by physician.

Form Supplied: Bottles of 30, 100, and 500 capsules.

Source: Casimir Funk Laboratories, Inc., New York, N. Y.

VI-ESTANDRO

Description: Each capsule contains: ethinyl estradiol, 0.02 mg.; methyltestosterone U.S.P., 5 mg.; vitamin A, 5000 U.S.P. units; vitamin D, 500 U.S.P. units; dl, alpha tocopheryl acetate, 1 mg.; vitamin B_{12}, 1 mcg.; thiamine mononitrate, 5 mg.; riboflavin, 5 mg.; niacinamide, 20 mg.; pyridoxine HCl, 0.5 mg.; d, calcium pantothenate, 5 mg.; and ascorbic acid, 50 mg.

Indications: For use as an anabolic stimulant in postclimacteric, female and male. To promote bone and tissue growth and repair in osteoporosis and fractures. In the female climacteric, when the neutralizing effect of androgen is desirable. In the male climacteric, to reduce pituitary gonadotropic hormone levels.

Administration: One to three capsules as directed by the physician.

Form Supplied: Bottles of 30, 100, and 500 capsules.

Source: Casimir Funk Laboratories, Inc., New York, N. Y.

VI-ESTRYN

Description: Each capsule contains: ethinyl estradiol, 0.02 mg.; dl, alpha tocopheryl acetate, 5 mg.; folic acid, 1 mg.; vitamin B_{12}, 1 mcg.; thiamine mononitrate, 5 mg.; riboflavin, 5 mg.; niacinamide, 20 mg.; pyridoxine HCl, 0.5 mg.; d, calcium pantothenate, 5 mg.; vitamin A, 5000 U.S.P. units; vitamin D, 500 U.S.P. units; and ascorbic acid, 50 mg.

Indications: In the menopause, kraurosis vulvae, senile vaginitis, pruritus vulvae, hypo-ovarianism, dysmenorrhea, postpartum breast engorgement; palliative in prostatic carcinoma.

Administration: As directed by the physician.

Form Supplied: Bottles of 30, 100, and 500 capsules.

Source: Casimir Funk Laboratories, Inc., New York, N. Y.

Other New Products

(Chemicals, clinical trial drugs, diagnostic aids, and equipment for the retail and hospital pharmacy, and new dosage forms of prescription products).

DIAGNEX TEST FOR ACHLORHYDRIA

Diagnex is a quinine carbacrylic resin indicator, which operates through a simple displacement of quinine by the hydrogen ions of the gastric hydrochloric acid. Fifteen to 20 per cent of the displaced quinine is excreted in the urine within two hours. The presence or absence of quinine in the urine within this period indicates the presence or absence of free hydrochloric acid in the stomach.

The test for achlorhydria is valuable in the diagnosis of cancer of the stomach, pernicious anemia and gastric polyps. The finding of achlorhydria never constitutes a final diagnosis of these conditions, but is very commonly associated with them. The Diagnex test is, therefore, a useful method of selecting patients who require further study.

Diagnex is supplied by *E. R. Squibb & Sons* in units consisting of one packet containing a caffeine sodium benzoate capsule (to stimulate gastric secretions) and one packet containing the quininium resin.

PRESCRIPTION PRODUCTS

DONNATAL PLUS TABLETS

Donnatal Plus Tablets have been recently announced by the *A. H. Robins Co., Inc.*, as combining the sedative-antispasmodic and anticholinergic potency of Donnatal with significant dosage of B complex vitamins frequently deficient in patients requiring spasmolytic therapy. It is also indicated in the treatment of fatigue states associated with abnormal carbohydrate metabolism. The recommended dosage is three to nine tablets daily, according to clinical response. Three tablets provide a full daily therapeutic quota of the important B factors. Donnatal Plus is supplied in bottles of 100 and 1000 green, sugar-coated tablets.

EL-ACORTO GEL

A purified form of corticotropin (ACTH) is now being offered to doctors, hospitals and the drug trade by *George A. Breon & Co.*, under the trade name of El-Acorto Gel. It supplements the firm's previously introduced ACTH preparation, Acorto Gel. Chief advantage of the purified product is that it is more easily liquefied at lower temperatures than the regular ACTH in the depot preparation.

It is indicated in treatment of rheumatoid arthritis, acute rheumatic fever, ulcerative colitis unresponsive to the usual therapies, and many allergic manifestations, including severe bronchial asthma. Usual dose is 40 to 60 units given either subcutaneously or intramuscularly, once or twice daily. It is supplied in 5-cc. multidose vials in two potencies.

Each cc. contains purified ACTH equivalent in clinical activity to either 40 or 80 U.S.P. units of corticotropin.

ESTROGENIC SUBSTANCES

Estrogenic Substances, a suspension of purified natural estrogens in an isotonic solution of sodium chloride has been introduced by *George A. Breon & Company*. The product, which is injected intramuscularly, is primarily indicated in the treatment of menopause, either natural or induced. Breon's aqueous suspension of Estrogenic Substances is supplied in two concentrations, 20,000 I.U. and 50,000 I.U. per cc. in 10-cc. multidose vials.

GEVRAL PROTEIN

Gevral Protein, a new addition to its line of geriatric products, designed for older persons in need of vitamin supplements, has been placed on the market by *Lederle Laboratories*. Gevral Protein contains balanced proportions of necessary vitamins, minerals and proteins. They are carried in a pleasant-tasting white powder, designed to be mixed with milk used on cereal or desserts. It is supplied in 1/2-lb. jars and 5-lb. cans.

HEDULIN

Exclusive manufacture of the recently council-accepted oral anticoagulant, Hedulin, has been announced by *Walker Laboratories*, New Rochelle, N.Y. Walker added this new product to its line through arrangement with Hed Pharmaceuticals, initial marketers of Hedulin. Hed-Heparin Sodium Injection U.S.P. has also been turned over to Walker by the company. Hed-Heparin was first announced in THIS JOURNAL in April, 1952; and Hedulin, in August, 1952.

HIBICON, BENZCHLORPROPAMIDE

A new, well-tolerated anti-epileptic drug, Hibicon (benzchlorpropamide), has been placed on the market by *Lederle Laboratories*. It is indicated in the treatment of grand mal epilepsy (complete seizure, loss of consciousness, tonic convulsions, etc.) and epilepsy manifested by psychomotor attacks—transient disturbances. The optimal dose of Hibicon must be determined for each patient. The average dose is from 0.5 Gm. to 1.0 Gm. orally, three to four times daily, with meals and before retiring. It is supplied in 250-mg. capsules in bottles of 100 and 1000, and in 500-mg. capsules in bottles of 100 and 1000.

TOPICAL OINTMENT OF HYDROCORTONE ACETATE

A new dosage form of Hydrocortone, brand of

(Continued on next page)

hydrocortisone, has been made available by *Merck & Co., Inc.* The new product is Topical Ointment of Hydrocortone Acetate, which is used locally for the relief of contact dermatitis, such as poison ivy, and for atopic dermatitis, including allergic, infantile, and food eczemas. In addition to the ointment form, Hydrocortone is available in injection and tablet form.

LEUCOVORIN

Leucovorin, a pure synthetic compound that can be used to counteract toxicity of the folic acid antagonists, has been placed on the market by *Lederle Laboratories*. The product can also be used in the treatment of certain types of anemia. Leucovorin, which is administered intramuscularly, is available in ampuls containing 1 cc. of fluid, with 3 mg. of leucovorin per cc. Six ampuls are packed to the box.

MEBARAL

Mebaral, the sedative and anti-epileptic drug produced by *Winthrop-Stearns, Inc.*, is now available in a new dosage of $^3/_4$ gr. tablets. It will supplement the $^1/_2$ gr., $1^1/_2$ gr. and 3 gr. tablet packings previously supplied. The tablets, scored for division, are supplied in bottles of 100 and 1000.

MEBAROIN

Mebaroin has been recently introduced by *Winthrop-Stearns, Inc.* Mebaroin is a combination tablet, consisting of Mebaral, a sedative and anti-epiliptic drug, and diphenylhydantoin, also widely used in the treatment of convulsive states. The product is supplied in bottles of 100 and 1000 scored tablets.

MEJALIN

Mead Johnson & Company has just introduced Mejalin, a broad spectrum B complex supplement, which provides more complete effectiveness in combating vitamin B complex deficiencies. Mejalin contains all eleven identified B complex vitamins, plus liver and iron in balanced amounts. It is available in pleasant-tasting liquid form in 12-oz. bottles and in capsule form in bottles of 100 and 500.

MELOZETS

Sharp & Dohme has recently introduced Melozets, methylcellulose wafers. These are a useful adjunct to a low calorie diet in the management of obese patients. They are supplied in $^1/_2$-lb. boxes.

METHISCHOL INJECTABLE

Methischol Injectable, a new form of Methischol, has just been placed on the market by *U. S. Vitamin Corporation*. Each 2-cc. ampul for intramuscular use provides: choline chloride, 200 mg; dl, methionine, 50 mg.; inositol, 100 mg.; and vitamin B_{12}, 6 mcg. Each 10-cc. ampul for use in intravenous infusions provides: choline chloride, 1000 mg.; dl, methionine, 250 mg.; inositol, 500 mg.; and vitamin B_{12}, 30 mcg. It is indicated in liver disorders, diabetes, hypercholesterolemia, coronary disease, atherosclerosis, alcoholism, nephrosis, and hypertension.

NAUCAINE

Taylor Laboratories have recently introduced Naucaine in two forms, tablet and solution. Each yellow tablet contains clinocaine hydrochloride (diethylaminoethyl-p-aminobenzoate), 120 mg.; the solution is a raspberry flavored red solution containing 10 per cent clinocaine hydrochloride. Naucaine is indicated for cessation of nausea of pregnancy, motion sickness, gastric irritation from medication, uremic toxemia, X-ray treatment and post-anesthesia. It is also indicated for the relief of pain of gastric ulcer, duodenal ulcer, pylorospasm, gastritis, esophageal lesions, jejunitis following gastric resection, and reduction of gastrocolic reflex. The recommended dosage for adults is three Naucaine tablets, followed by one tablet every hour until relieved; for children over 10—$^1/_2$ of adult dosage; and for children 5–10—$^1/_5$ of adult dosage. The recommended dosage of Naucaine solution is two teaspoonfuls, followed by one teaspoonful every half-hour for four hours followed by one teaspoonful every hour. Antacids should not be administered within 30 minutes of Naucaine therapy. Naucaine is supplied in bottles of 50 and 250 tablets, and dropper stopper bottles of 60 cc. and pints.

NEW DOSAGE SIZE OF CRYSTALLINE PROCAINE PENICILLIN G

Steraject cartridges containing 600,000 units of crystalline procaine penicillin G aqueous suspension are now being marketed by the antibiotic division of *Chas. Pfizer & Co., Inc.* Like the other antibiotic cartridges of 300,000 and 1,000,000 units, the new size will also be supplied in individual cartons containing a sterile, foil-wrapped needle, packed 25 cartridges in a shelf carton. Bulk cartons of 100 cartridges without needles are also available from Pfizer.

REMANDEN TABLETS

Remanden Tablets, a new dosage form of oral penicillin therapy, combining Benemid Probenecid and penicilin, was recently introduced by *Sharp & Dohme, Inc.* Each tablet contains 100,000 units of crystalline potassium penicillin G and 0.25 Gm. of Probenecid. It is indicated for oral administration when prolonged plasma concentrations of penicillin are desired. Remanden Tablets should be given preferably on a fasting stomach. Recommended treatment consists of four tablets initially, then two tablets every six to eight hours. Dosage for children, on the basis of 0.025 Gm. of Probenecid per kilogram (2.2 lb.) of body weight, is two to four tablets per day. The tablets are supplied in vials of 12.

NEW PRESCRIPTION PRODUCTS INDEX

AUGUST, 1952 TO FEBRUARY, 1953

BY PRODUCT

Aerolone Compound, Lilly, Sept., 612
Aerosporin Otic Sol., Burroughs Wellcome, Sept., 613
Almenic, Meyer Chemical, Jan., 12
Anectine Chloride, Burroughs Wellcome, Oct., 713
Apamide, Ames, Oct., 713
A.P. Cillin, White, Dec., 839
Apolamine, Winthrop, Aug., 553
Apromal, Ames, Oct., 713
Aquacillin A-S, Schenley, Oct., 713
Aqueous Hormones, Breon, Aug., 555
Aramine w/Mijit Atomizer, Sharp & Dohme, Oct., 713
Aureomycin Calcium Oral Drops & Syrup, Lederle, Dec., 841

Bacimycin, Walker, Aug., 553
Bacimycin Tablets, Walker, Dec., 841
Benadryl with Hyoscine, Parke-Davis, Dec., 841
Bevidox Solution, Abbott, Nov., 761
Bicillin L-A, Wyeth, Oct., 713
Bi-Co-Tussin, Bischoff, Oct., 713
Bidrolin, Armour, Aug., 553
Biomydrin, Nepera, Jan., 11
Breonex-M, Breon, Oct., 713
Bristapen Tablets, Bristol, Dec., 839
Bristo-O-Matic Syringe, Bristol, Nov., 763

Caladryl Cream, Parke-Davis, Dec., 841
Cardalin, Irwin, Neisler, Dec., 839
Cenasert, Central, Dec., 839
Chloral Hydrate, Fellows, Sept., 612
Chloro-Sul, Columbus Pharmacal, Dec., 841
Cillorets, Bristol, Dec., 839
Cobetaron, Warren-Teed, Aug., 553
Codempiral, Burroughs, Jan., 11
Cortogen Acetate Injection, Schering, Dec., 841
Cortogen Acetate Ophth. Sol., Schering, Nov., 761
Covisten, Organon, Oct., 714
Cream Phenergan Hydrochloride, Wyeth, Oct., 715
Crephex, Schenley, Nov., 761
Cumertillin Tablets, Endo, Oct., 714

Dainite, Irwin, Neisler, Dec., 842
Dermabase, Marcelle, Dec., 842
Dexedrine Spansules, SK & F, Sept., 612
Distrycillin A.S., Squibb, Nov., 763
Dodecabee-1000, Miller, Aug., 553
Drilitol Spraypak, SK & F, Oct., 715
Ducobee 1000, Breon, Oct., 714

Ediol, Schenley, Nov., 761
Erythrocin, Abbott, Nov., 763
Esteed Tablets, Warren-Teed, Nov., 761
Estrone-Progesterone, Breon, Dec., 842

Feosol Hematonic, SK & F, Oct., 714
Fiorinal Tablets, Sandoz, Oct., 714
Furacin Soluble Powder, Eaton, Dec., 842

Gantricillin, Hoffmann-La Roche, Jan., 13
Gantrisin Diethanolamine Ophth. Oint., Hoffman-LaRoche Aug., 555
Gantrisin Nasal Sol., Hoffman-LaRoche, Dec., 842
Gantrisin Pediatric Susp., Hoffman-LaRoche, Oct., 715
G-B-S, Harvey, Jan., 11
Gelfoam Powder, Upjohn, Jan., 13
Gericin, Benya Drug, Jan., 11
Glyotol, U. S. Standard, Jan., 11
Guaiatussin, White, Dec., 839

Harvoglobin, Harvey, Jan., 11
Hedulin, HED Pharmaceuticals, Aug., 553
Hexamethon, Burroughs Wellcome, Sept., 612
Histoplasmin, Parke-Davis, Jan., 13
Histussin, Meyer, Nov., 762
Hyazyme, Abbott, July, 512
Hydrolose Fortified, Upjohn, Oct., 716

Ilotycin, Lilly, Nov., 763
INH, Lilly, Sept., 612
Isolyn, Abbott, Sept., 613
Isopto-Alkaline, Alcon Labs., Nov., 763
Isopto-Cetamide, Alcon Labs., Dec., 839

Kolantyl Gel, Merrell, Oct., 716

Lactinex Tablets, Hynson, Westcott & Dunning, Oct., 714

Martussin-MRT, Thompson, Dec., 840
Menagen with Methyltestosterone, Parke-Davis, Dec., 842
Mephamide, Columbus Pharmacal, Dec., 842
Mephedexin, Columbus Pharmacal, Dec., 842
Mephyton Emulsion, Merck, Oct., 716
Mertestate, Breon, Dec., 842
Methium Chloride, Chilicott, Aug., 555
Milibis Tablets, Winthrop, Sept., 613
Milkinol, Kremers-Urban, Jan., 13
M.I.V., Merrell, Aug., 554
Modulan, Am. Chloresterol, Oct., 716
Mol-Iron E.M.F., White, Sept., 613
Mucotin, Harrower, Nov., 763
Myadec, Parke-Davis, Dec., 840
Myciguent Cream, Upjohn, Jan., 13

Natabec Kapseals, Parke-Davis, Dec., 840
Natalins, Mead Johnson, Oct., 714
Neobacin Tablets, C.S.C., Oct., 714
Neocylate w/Codeine, Central, Dec., 842
Neocyten Central, Dec., 840
Neosone Ophth. Ointment, Upjohn, Jan., 12
Neo-Synephrine Ophth. Viscous Sol., Winthrop, Nov., 763
Neo-Synephrine-Thenfadil-Zephiran, Winthrop, Oct., 716
Nio-A-Let, Nion, Aug., 554
Novahistine Tablets, Pitman-Moore, Dec., 842
Nydrazid Inj., Squibb, Dec., 843

Oxityl-P, Merrell, Sept., 613

Penicillin G Procaine in Aqueous Susp., Abbott, Nov., 762
Penicillin, New Dosages, Winthrop, Jan., 13
Pentids Soluble Tablets, Squibb, Oct., 716
Phenergan Expectorant w/Codeine, Wyeth, Aug., 555
Phenergan Hydrochloride, Cream, Wyeth, Oct., 715
Phenergan Lotion w/Neocalamine, Wyeth, Sept., 613
Plebilin Plus, Plessner, Dec., 840
Polysporin Ointment, Burroughs Wellcome, Sept., 613
Polyvims, Miller, Aug., 554
Pontocaine Cream, Winthrop, Dec., 843
Prantal Methylsulfate, inj., Schering, Aug., 555
Pyribenzamine Cream w/Zirconium, Ciba, Aug., 555

Rhoplex, Vitarene, Aug., 554
Rubramin, Squibb, Aug., 555

Sedadrops, Walker, Oct., 715
Sedesin, Otis Labs., Jan., 12
Soris, Ar-Ex, Nov., 762
Spectrocin, Squibb, Oct., 715
Strepels (vet.), Wyeth, Aug., 554
Sugracillin 250M & Sulfa-Sugracillin 250M, Upjohn, Oct., 716
Sulestrex Piperazine Elixir, Abbott, Dec., 843
Sulfonsol with Penicillin, National Drug, Dec., 840
Syncrobin Supp., Schenley, Jan., 13
Syrup H.S., Talbott, Nov., 762

Tegumin Creme, Warren-Teed, Nov., 762
Tensodin, Bilhuber, Jan., 12
Terramycin Oral Susp., Pfizer, Oct., 716
Thaverine, Pitman-Moore, Dec., 840
Theelandrol, Parke-Davis, Dec., 841
Thera-Concemin, Merrell, Dec., 843
Therapeutin, Walker, Oct., 715
Theridol Kapseals, Parke-Davis, Jan., 12
Thyrar, Armour, Dec., 841
Tisin, Casimir Funk, Oct., 715
Tolulexin Elixir, Miller, Dec., 843
Tosanon, Organon, Jan., 12
Trophite, SK&F, Dec., 843
Tryptal Aerosol, Armour, Oct., 716
Tweltone, Pitman-Moore, Dec., 843
Tyotocin Ear Drops, Sharp & Dohme, Jan., 12
Tyrophyll Troche, U. S. Standard, Jan., 12
Tyvid, Merrell, Sept., 613

Urokon Sodium Sterile Sol. 70%, Mallinckrodt, Jan., 13

Valentine's Meat Extract, Valentine, Dec., 843
Vascutol, Schenley, Nov., 762
Vergitryl Intramuscular, Squibb, Jan., 13
Vergitryl Tablets, Squibb, Aug., 554
Vi-Aquamin, U. S. Vitamin, Aug., 554
Vi-Lin Drops, Abbott, Nov., 762
Vita-Kaps Improved, Abbott, Oct., 716

Xiphisternal Cartilage, Armour, Dec., 843

BY MANUFACTURER

Abbott Laboratories
- Bevidox Sol., Nov., 761
- Erythrocin, Nov., 763
- Isolyn, Sept., 613
- Pencillin G Procaine, Nov., 762
- Sulestrex Piperazine Elixir, Dec., 843
- Vi-Lin Drops, Nov., 762
- Vita-Kaps, Improved, Oct., 716

Alcon Laboratories
- Isopto-Alkaline, Nov., 763
- Isopto-Cetamide, Dec., 839

American Cholesterol Products, Inc.
- Modulan, Oct., 713

Ames Company, Inc.
- Apamide, Oct., 713
- Apromal, Oct., 713

Ar-Ex Cosmetics, Inc.
Soris, Nov., 762
Armour Laboratories
Bidrolin, Aug., 553
Thyrar Aerosol, Oct., 716
Xiphisternal Cartilage, Dec., 843
Benya Drug Company
Gericin, Jan., 11
Bilhuber-Knoll Corporation
Tensodin, Jan., 12
Ernst Bischoff Company
Bi-Co-Tussin, Oct., 713
George A. Breon & Co., Inc.
Aqueous Hormones, Aug., 555
Breonex-M, Oct., 713
Estrone-Progesterone, Dec., 842
Mertestate, Dec., 842
Bristol Laboratories, Inc.
Bristapen Tablets, Dec., 839
Brist-O-Matic Syringe, Nov., 763
Cillorets, Dec., 839
Mytinic Liquid, Aug., 555
Burroughs Wellcome & Co. (USA)
Aerosporin Otic Sol., Sept., 613
Anectine Chloride, Oct., 713
Codempiral, Jan., 11
Hexamethon, Sept., 612
Polysporin Ointment, Sept., 613
Central Pharmacal Company
Cenasert, Dec., 839
Neocylate w/Codeine, Dec., 842
Neocyten, Dec., 840
Chilcott Laboratories
Methium Chloride, Aug., 555
Ciba Pharmaceutical Products, Inc.
Pyribenzamine Cream w/Zirconium, Aug., 555
Columbus Pharmacal Co.
Chloro-Sul, Dec., 841
Mephamide, Dec., 842
Mephedexin, Dec., 842
Commercial Solvents Corp., (C.S.C.)
Neobacin Tablets, Oct., 714
Eaton Laboratories
Furacin Soluble Powder, Dec., 842
Endo Products, Inc.
Cumertillin Tablets, Oct., 714
Fellows Pharmaceuticals, Inc.
Chloral Hydrate, Sept., 612
Casimir Funk Laboratories, Inc.
Tisin, Oct., 715
Harrower Laboratories
Mucotin, Nov., 763
G. F. Harvey Company
G-B-S, Jan., 11
Harvoglobin, Jan., 11
HED Pharmaceuticals, Inc.
Hedulin, Aug., 553
Hoffman-LaRoche, Inc.
Gantricillin, Jan, 13
Gantrisin Diethanolamine Ophth. Oint., Aug., 555
Gantrisin Nasal Sol., Dec., 842
Gantrisin Pediatric Susp., Oct., 715
Hynson, Westcott & Dunning, Inc.
Lactinex Tablets, Oct., 714
Irwin, Neisler & Company
Cardalin, Dec., 839
Dainite, Dec., 842
Kremers-Urban Company
Milkinol, Jan., 13
Lederle Laboratories Div., American Cyanamid Co.
Aureomycin Calcium Oral Drops & Syrup, Dec., 841
Eli Lilly & Company
Ilotycin, Nov., 763
INH, Sept., 612
Mallinckrodt Chemical Works
Urokon Sodium Sterile Sol. 70%, Jan., 13
Marcelle Pharmaceuticals, Inc.
Dermabase, Dec., 842
Mead Johnson & Co.
Natalins, Oct., 714
Merck & Co., Inc.
Mephyton Emulsion, Oct., 716
Wm. S. Merrell Co.
Kolantyl Gel, Oct., 716
M.I.V., Aug., 554
Oxityl-P, Sept., 613
Thera-Concemin, Dec., 843
Tyvid, Sept., 613
Meyer Chemical Co., Inc.
Almenic, Jan., 12
Histussin, Nov., 762
E. S. Miller Laboratories, Inc.
Dodecabee-1000, Aug., 553
Polyvins, Aug., 554
Talulexin, Dec., 843

National Drug Company
Sulfonsol w/Penicillin, Dec., 840
Nepera Chemical Company, Inc.
Biomydrin, Jan., 11
Nion Corporation
Nio-A-Let, Aug., 554
Organon, Inc.
Covisten, Oct, 714
Tosanon, Jan., 12
Otis Laboratories, Inc.
Sedesin, Jan., 12
Parke, Davis & Co., Inc.
Benadryl w/Hyoscine, Dec., 841
Caladryl Cream, Dec., 841
Histoplasmin, Jan., 13
Menagen with Methyltestosterone, Dec., 842
Myadec, Dec., 840
Natabec Kapseals, Dec., 840
Theelandrol, Dec., 841
Theridol Kapseals, Jan., 12
Chas. Pfizer & Co., Inc.
Terramycin Oral Susp., Oct., 716
Pitman-Moore Company
Novahistine Tablets, Dec., 842
Thaverine, Dec., 840
Tweltone, Dec., 843
The Paul Plessner Company
Plebilin Plus, Dec., 840
Sandoz Pharmaceuticals
Fiorinal Tablets, Oct., 714
Scherley Laboratories, Inc.
Aquacilin A-S, Oct., 715
Crephex, Nov., 761
Ediol, Nov., 761
Syncrobin Supp., Jan., 13
Vascutol, Nov., 762
Schering Corporation
Cortogen-Acetate Inj., Dec., 841
Cortogen Acetate Ophth. Susp., Nov., 761
Prantal Methylsulfate Inj., Aug., 555
Sharpe & Dohme, Inc.
Aramine w/Mijit Atomizer, Oct., 713
Tyotocin Ear Drops, Jan., 12
Smith, Kline & French Laboratories, Inc.
Dexedrine Spansules, Sept., 612
Drilitol Spraypak, Oct., 175
Feosol Hematonic, Oct., 714
Trophite, Dec., 843
E. R. Squibb & Sons
Distrycillin A-S, Nov., 763
Nydrazid Inj., Dec., 843
Pentids Soluble Tablets, Oct., 716
Rubramin, Aug., 555
Spectrocin, Oct., 715
Vergitryl Intramuscular, Jan., 13
Vergitryl Tablets, Aug., 554
Talbott Pharmaceuticals
Syrup H. S., Nov., 762
Marvin R. Thompson, Inc.
Martussin-MRT, Dec., 840
Upjohn Company
Gelfoam Powder, Jan., 13
Myciguent Cream, Jan., 13
Neosone Ophth. Ointment, Jan., 13
U. S. Standard Products Company
Glyotol, Jan., 11
Tyrophyll Troche, Jan., 12
U. S. Vitamin Corp.
Vi-Aquamin, Aug., 554
The Upjohn Company
Hydrolose Fortified, Oct., 715
Sugracillin 250M & Sulfa-Surgracillin 250M, Oct., 716
Valentine & Company
Valentine's Meat Extract, Dec., 843
The Vitrarene Company
Rhoplex, Aug., 554
Walker Laboratories, Inc.
Bacimycin Aug., 553
Bacimycin Tablets, Dec, 841
Sedadrops, Oct., 715
Therapeutin, Oct., 715
The Warren-Teed Products Co.
Cobetaron Caps., Aug., 553
Esteed Tablets, Nov., 761
Tegumin Creme, Nov., 762
White Laboratories, Inc.
A P Cilin, Dec., 839
Guaiatussin, Dec., 839
Mol-Iron E.M.F., Sept., 613
Winthrop-Stearns, Inc.
Apolamine, Aug., 553
Milibis Tablets, Sept., 613
Neo-Synephrine Ophth. Viscous Sol., Nov., 763
Neo-Synephrine-Thenfadil-Zephiran, Oct., 716
Penicillin, Dew Dosages, Jan., 13
Pontocaine Cream, Dec., 843
Wyeth, Inc.
Bicillin L-A, Oct., 713
Cream Phenergan Hydrochloride, Oct., 715
Phenergan Expectorant w/Codeine, Aug., 555
Phenergan Lotion w/Neocalamine, Sept., 613
Strepels (vet.) Aug., 554

2 AMES BUSINESS BUILDERS

for pain relief

APAMIDE *tablets*

N-acetyl-p-aminophenol, AMES

analgesic · antipyretic

prompt pain-relieving action of *Apamide* means *big prescription demand.*

prolonged pain relief means *repeat business* and *quick turnover.*

prescribed for frequently encountered conditions – respiratory infections, functional headache, muscular or joint pain and dysmenorrhea—*Apamide means high-profit volume business.*

for pain relief + sedation

APROMAL *tablets*

N-acetyl-p-aminophenol and acetylcarbromal, AMES

non-narcotic and non-barbiturate

sedative · analgesic · antipyretic

For the many patients who need sedation *plus* pain relief. *Apamide* and acetylcarbromal, combined in *Apromal,* potentiate each other—and your sales, too.

Order through your wholesaler now. Supplied in bottles of 100.

Apamide, Apromal and *Freescription* are trademarks of Ames Company, Inc.

AMES The FREESCRIPTION House
COMPANY, INC • ELKHART, INDIANA

Ames Company of Canada, Ltd., Toronto

the new **WELL-TOLERATED**

wide-range antibiotic

'Ilotycin' is a powerful antibacterial of proved effectiveness* in the treatment of infections due to:

ORGANISMS	INFECTIONS
1. Staphylococci	Bacteremia, meningitis, pneumonia, osteomyelitis
2. Hemolytic streptococci	Cellulitis, erysipelas, peritonsillar abscess, pharyngitis, pneumonia, scarlet fever, septic sore throat, tonsillitis, wound infections
3. Pneumococci	Empyema, lobar pneumonia
4. Corynebacterium diphtheriae	Diphtheria carriers
5. Nonhemolytic streptococci	Some cases of endocarditis, genito-urinary tract infections

*References

1. Heilman, F. R., Herrell, W. E., Wellman, W. E., and Geraci, J. E.: Some Laboratory and Clinical Observations on a New Antibiotic, Erythromycin ('Ilotycin'), Proc. Staff Meet., Mayo Clin., 27:285 (July 16), 1952. 2. Haight, T. H., and Finland, M.: Laboratory and Clinical Studies on Erythromycin, New England J. Med., 247:227 (August 14), 1952. 3. Smith, J. W., Dyke, R. W., and Griffith, R. S.: Erythromycin: Studies on Absorption Following Oral Administration and on Treatment of 33 Patients, to be published. 4. Spink, W. W.: Personal communications. 5. Romansky, M. J.: Personal communications.

Lilly

Dosage: Adults—Total daily doses of 400 to 2,000 mg. are recommended, depending on the type and severity of the infection. Lobar pneumonia, bronchopneumonia, and some of the milder types of respiratory infections caused by organisms susceptible to 'Ilotycin' have consistently responded to doses of 100 mg. every four to six hours. For other infections, larger doses of 300 to 500 mg. every six to eight hours should be employed.
Children—6 to 8 mg. per Kg. of body weight every six hours. Therapy should be continued for at least forty-eight hours after the temperature has returned to normal and acute symptoms have subsided.
Available in 100-mg. specially coated tablets in bottles of 36.

ILOTYCIN

Lilly THE ORIGINATOR OF ERYTHROMYCIN